



Edward Peake
C of E (VC) Middle School

Mathematics Department

"Encourage each other and build each other up" (Thessalonians 5:11)

Year 5 Home Study Pack

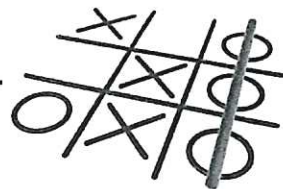
- Lessons and activities are available on the Year 5 google classroom
 - Students should use Maths Whizz for at least 1 hour a week
- If students are stuck they should use the stream on the google classroom.
This will be checked regularly between 9:00 am and 3:00 pm on school days
during term time

The class code is: 5wszby7

Pack 2 : Summer Term 1

Name: _____

Multiplication Tic-Tac-Toe



Solve each multiplication problem. Then, write X or O over the corresponding numbers on the tic-tac-toe board. If you get three in a row, draw a line through it.

$$\begin{array}{r} 2 \\ X \times 5 \end{array}$$

$$\begin{array}{r} 2 \\ O \times 2 \end{array}$$

$$\begin{array}{r} 2 \\ X \times 3 \end{array}$$

2	4	6
8	10	12
14	16	18

$$\begin{array}{r} 2 \\ O \times 4 \end{array}$$

$$\begin{array}{r} 2 \\ X \times 8 \end{array}$$

$$\begin{array}{r} 2 \\ O \times 9 \end{array}$$

$$\begin{array}{r} 2 \\ X \times 7 \end{array}$$

$$\begin{array}{r} 2 \\ O \times 6 \end{array}$$

$$\begin{array}{r} 2 \\ X \times 1 \end{array}$$

$$\begin{array}{r} 3 \\ O \times 6 \end{array}$$

$$\begin{array}{r} 3 \\ X \times 3 \end{array}$$

$$\begin{array}{r} 3 \\ O \times 8 \end{array}$$

3	6	9
12	15	18
21	24	27

$$\begin{array}{r} 3 \\ X \times 5 \end{array}$$

$$\begin{array}{r} 3 \\ O \times 4 \end{array}$$

$$\begin{array}{r} 3 \\ X \times 2 \end{array}$$

$$\begin{array}{r} 3 \\ O \times 7 \end{array}$$

$$\begin{array}{r} 3 \\ X \times 9 \end{array}$$

$$\begin{array}{r} 3 \\ O \times 1 \end{array}$$

$$\begin{array}{r} 4 \\ X \times 3 \end{array}$$

$$\begin{array}{r} 4 \\ O \times 5 \end{array}$$

$$\begin{array}{r} 4 \\ X \times 7 \end{array}$$

4	8	12
16	20	24
28	32	36

$$\begin{array}{r} 4 \\ O \times 1 \end{array}$$

$$\begin{array}{r} 4 \\ X \times 8 \end{array}$$

$$\begin{array}{r} 4 \\ O \times 9 \end{array}$$

$$\begin{array}{r} 4 \\ X \times 6 \end{array}$$

$$\begin{array}{r} 4 \\ O \times 2 \end{array}$$

$$\begin{array}{r} 4 \\ X \times 4 \end{array}$$

Name: _____

Multiplication Tic-Tac-Toe



Solve each multiplication problem. Then, write X or O over the corresponding numbers on the tic-tac-toe board. If you get three in a row, draw a line through it.

X $\begin{array}{r} 11 \\ \times 8 \\ \hline \end{array}$

O $\begin{array}{r} 11 \\ \times 1 \\ \hline \end{array}$

X $\begin{array}{r} 11 \\ \times 5 \\ \hline \end{array}$

11	22	33
44	55	66
77	88	99

O $\begin{array}{r} 11 \\ \times 6 \\ \hline \end{array}$

X $\begin{array}{r} 11 \\ \times 3 \\ \hline \end{array}$

O $\begin{array}{r} 11 \\ \times 7 \\ \hline \end{array}$

X $\begin{array}{r} 11 \\ \times 4 \\ \hline \end{array}$

O $\begin{array}{r} 11 \\ \times 9 \\ \hline \end{array}$

X $\begin{array}{r} 11 \\ \times 2 \\ \hline \end{array}$

O $\begin{array}{r} 12 \\ \times 9 \\ \hline \end{array}$

X $\begin{array}{r} 12 \\ \times 4 \\ \hline \end{array}$

O $\begin{array}{r} 12 \\ \times 5 \\ \hline \end{array}$

12	24	36
48	60	72
84	96	108

X $\begin{array}{r} 12 \\ \times 2 \\ \hline \end{array}$

O $\begin{array}{r} 12 \\ \times 7 \\ \hline \end{array}$

X $\begin{array}{r} 12 \\ \times 8 \\ \hline \end{array}$

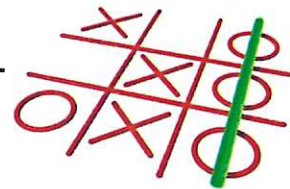
O $\begin{array}{r} 12 \\ \times 6 \\ \hline \end{array}$

X $\begin{array}{r} 12 \\ \times 3 \\ \hline \end{array}$

O $\begin{array}{r} 12 \\ \times 1 \\ \hline \end{array}$

Name: _____

Multiplication Tic-Tac-Toe



Solve each multiplication problem. Then, write X or O over the corresponding numbers on the tic-tac-toe board. If you get three in a row, draw a line through it.

$$\begin{array}{r} 8 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ \times 8 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ \times 5 \\ \hline \end{array}$$

8	16	24
32	40	48
56	64	72

$$\begin{array}{r} 8 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ \times 9 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ \times 1 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ \times 8 \\ \hline \end{array}$$

9	18	27
36	45	54
63	72	81

$$\begin{array}{r} 9 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ \times 1 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ \times 9 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 10 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 10 \\ \times 1 \\ \hline \end{array}$$

$$\begin{array}{r} 10 \\ \times 2 \\ \hline \end{array}$$

10	20	30
40	50	60
70	80	90

$$\begin{array}{r} 10 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 10 \\ \times 8 \\ \hline \end{array}$$

$$\begin{array}{r} 10 \\ \times 3 \\ \hline \end{array}$$

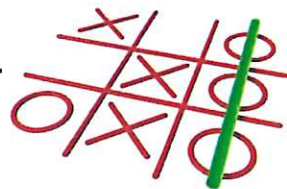
$$\begin{array}{r} 10 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 10 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 10 \\ \times 9 \\ \hline \end{array}$$

Name: _____

Multiplication Tic-Tac-Toe



Solve each multiplication problem. Then, write X or O over the corresponding numbers on the tic-tac-toe board. If you get three in a row, draw a line through it.

$$\begin{array}{r} 5 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \\ \times 9 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \\ \times 7 \\ \hline \end{array}$$

5	10	15
20	25	30
35	40	45

$$\begin{array}{r} 5 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \\ \times 1 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \\ \times 8 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \\ \times 6 \\ \hline \end{array}$$

6	12	18
24	30	36
42	48	54

$$\begin{array}{r} 6 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \\ \times 1 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \\ \times 8 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \\ \times 9 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ \times 6 \\ \hline \end{array}$$

7	14	21
28	35	42
49	56	63

$$\begin{array}{r} 7 \\ \times 1 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ \times 8 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ \times 9 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ \times 2 \\ \hline \end{array}$$

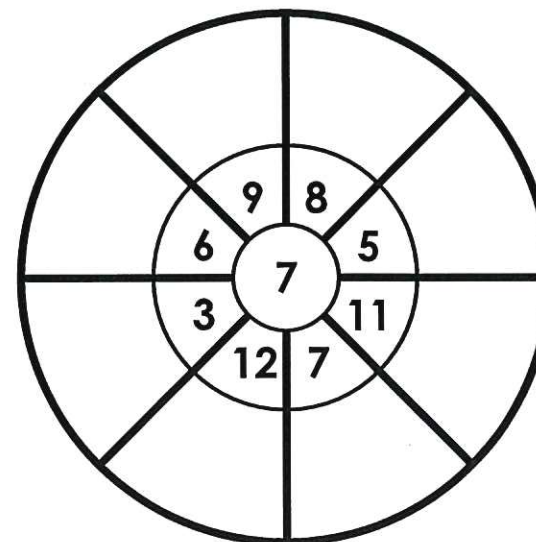
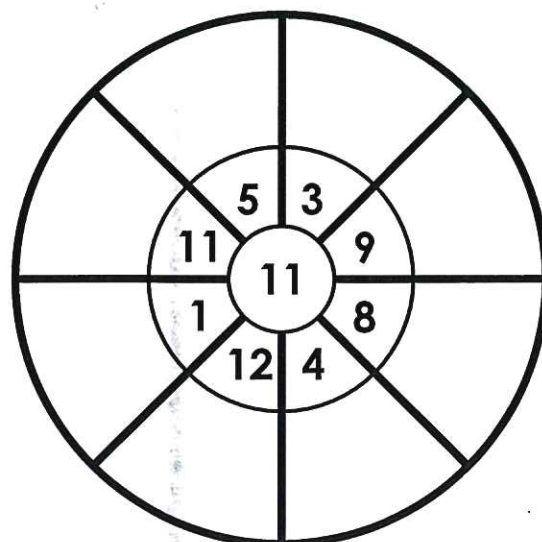
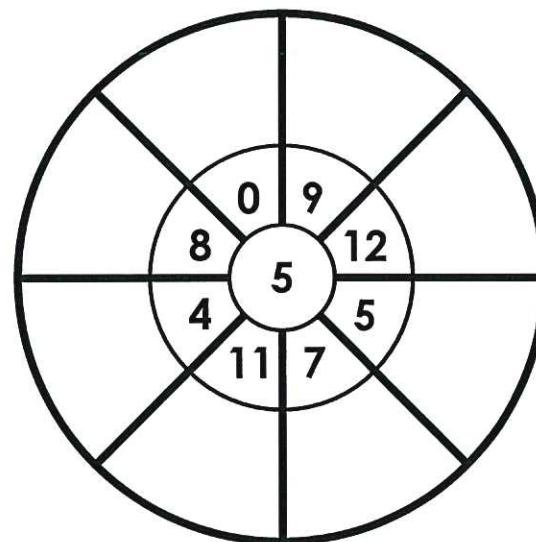
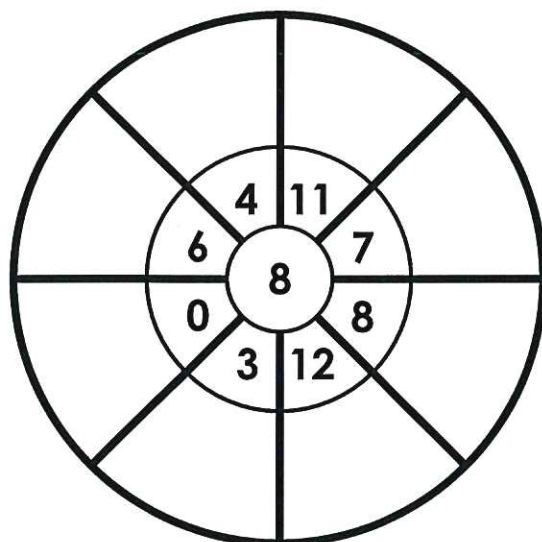
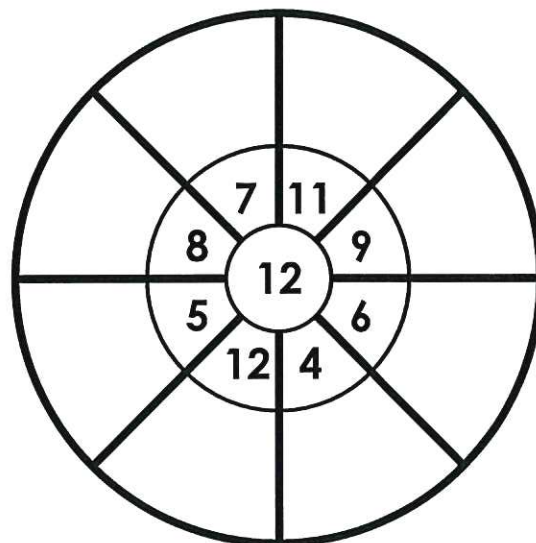
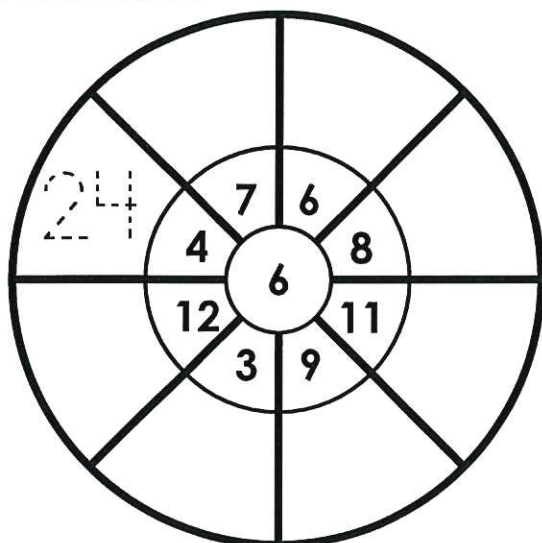
$$\begin{array}{r} 7 \\ \times 4 \\ \hline \end{array}$$

Name: _____

Basic Facts 0-1

Multiplication Wheels

Multiply the number in the center circle by each of the factors surrounding it. Write the product on the outer circle.



Day 1

Number Chart

Starting at 9, skip-count by 9, and fill in the missing numbers.

9,	18 ,	_____	_____	_____
_____	_____	_____	_____	_____
_____	108,	_____	_____	135,
_____	153 ,	_____	_____	180,
189,	_____	_____	216,	_____
_____	_____	_____	261,	_____

Day 1

Math Worksheet

1 a. $9 \times 6 =$ _____

1 b. $9 \times 3 =$ _____

2 a. $9 \times 11 =$ _____

2 b. $9 \times 9 =$ _____

3 a. $2 \times 9 =$ _____

3 b. $8 \times 9 =$ _____

4 a. $9 \times 4 =$ _____

4 b. $9 \times 5 =$ _____

5 a. $10 \times 9 =$ _____

5 b. $7 \times 9 =$ _____

6 a. $12 \times 9 =$ _____

6 b. $3 \times 9 =$ _____

7 a. $9 \times 8 =$ _____

7 b. $1 \times 9 =$ _____

8 a. $9 \times 1 =$ _____

8 b. $9 \times 6 =$ _____

9 a. $12 \times 9 =$ _____

9 b. $9 \times 2 =$ _____

10 a. $8 \times 9 =$ _____

10 b. $9 \times 9 =$ _____

Day 2

Number Chart

Starting at 270, skip-count by 9, and fill in the missing numbers.

270,	261,	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	153,	_____
134,	_____	_____	108,	99,
_____	_____	72,	_____	_____
_____	_____	27,	_____	9,

Time yourself on this 9x table speed sheet.

I took _____ minutes

$3 \times 9 =$	$12 \times 9 =$	$9 \times 1 =$	$9 \times 2 =$
$90 \div 9 =$	$81 \div 9 =$	$36 \div 9 =$	$9 \div 9 =$
$6 \times 9 =$	$9 \times 9 =$	$6 \times 9 =$	$8 \times 9 =$
$4 \times 9 =$	$10 \times 9 =$	$4 \times 9 =$	$9 \times 12 =$
$63 \div 9 =$	$27 \div 9 =$	$72 \div 9 =$	$54 \div 9 =$
$1 \times 9 =$	$12 \times 9 =$	$9 \times 9 =$	$9 \times 7 =$
$2 \times 9 =$	$9 \times 8 =$	$9 \times 3 =$	$9 \times 11 =$
$108 \div 9 =$	$54 \div 9 =$	$0 \div 9 =$	$81 \div 9 =$
$5 \times 9 =$	$11 \times 9 =$	$9 \times 5 =$	$9 \times 10 =$

Day 3

Math Worksheet

1 a. _____ $\times 9 = 90$

1 b. _____ $\times 10 = 90$

2 a. _____ $\times 9 = 99$

2 b. $9 \times$ _____ $= 36$

3 a. _____ $\times 9 = 54$

3 b. _____ $\times 9 = 45$

4 a. $9 \times$ _____ $= 108$

4 b. $9 \times$ _____ $= 27$

5 a. $9 \times$ _____ $= 45$

5 b. $9 \times$ _____ $= 1$

6 a. $9 \times$ _____ $= 72$

6 b. _____ $\times 9 = 72$

7 a. $9 \times$ _____ $= 63$

7 b. _____ $\times 11 = 99$

8 a. $9 \times$ _____ $= 45$

8 b. $9 \times$ _____ $= 36$

9 a. _____ $\times 9 = 27$

9 b. $9 \times$ _____ $= 0$

10 a. $9 \times$ _____ $= 108$

10 b. $9 \times$ _____ $= 18$

Day 3 – 15 mins

Test 1		<u>Multiplication challenge</u>												
		<u>Name:</u>					<u>Date:</u>							
1	$9 \times 9 =$		1	$9 \times 9 =$		1	$45 \div 9 =$		1	$108 \div 9 =$				
2	$0 \times 9 =$		2	$72 \div 9 =$		2	$63 \div 9 =$		2	$9 \times 9 =$				
3	$54 \div 9 =$		3	$18 \div 9 =$		3	$5 \times 9 =$		3	$9 \times 3 =$				
4	$27 \div 9 =$		4	$0 \times 9 =$		4	$9 \times 9 =$		4	$27 \div 9 =$				
5	$9 \times 9 =$		5	$36 \div 9 =$		5	$9 \times 2 =$		5	$6 \times 9 =$				
6	$63 \div 9 =$		6	$9 \times 9 =$		6	$81 \div 9 =$		6	$9 \times 9 =$				
7	$10 \times 9 =$		7	$9 \times 3 =$		7	$108 \div 9 =$		7	$54 \div 9 =$				
8	$12 \times 9 =$		8	$9 \div 9 =$		8	$9 \times 0 =$		8	$45 \div 9 =$				
9	$9 \times 9 =$		9	$9 \times 9 =$		9	$9 \times 9 =$		9	$9 \times 9 =$				
10	$54 \div 9 =$		10	$99 \div 9 =$		10	$99 \div 9 =$		10	$0 \times 9 =$				
11	$9 \times 6 =$		11	$45 \div 9 =$		11	$81 \div 9 =$		11	$18 \div 9 =$				
12	$63 \div 9 =$		12	$9 \times 0 =$		12	$27 \div 9 =$		12	$63 \div 9 =$				
13	$11 \times 9 =$		13	$9 \times 9 =$		13	$9 \times 5 =$		13	$9 \times 6 =$				
14	$12 \times 9 =$		16	$81 \div 9 =$		16	$18 \div 9 =$		16	$45 \div 9 =$				
15	$9 \times 0 =$		15	$36 \div 9 =$		15	$5 \times 9 =$		15	$90 \div 9 =$				
16	$27 \div 9 =$		16	$9 \times 12 =$		16	$9 \times 9 =$		16	$18 \div 9 =$				
17	$9 \times 9 =$		17	$9 \times 9 =$		17	$99 \div 9 =$		17	$5 \times 9 =$				
18	$9 \times 3 =$		18	$10 \times 9 =$		18	$54 \div 9 =$		18	$9 \times 3 =$				
19	$18 \div 9 =$		19	$9 \times 3 =$		19	$81 \div 9 =$		19	$10 \times 9 =$				
20	$6 \times 9 =$		20	$108 \div 9 =$		20	$36 \div 9 =$		20	$9 \times 11 =$				
21	$108 \div 9 =$		24	$11 \times 9 =$		24	$6 \times 9 =$		24	$9 \times 9 =$				
22	$90 \div 9 =$		22	$32 \div 9 =$		22	$9 \times 9 =$		22	$27 \div 9 =$				
23	$36 \div 9 =$		23	$9 \times 6 =$		23	$9 \times 12 =$		23	$99 \div 9 =$				
24	$9 \times 5 =$		24	$72 \div 9 =$		24	$0 \times 9 =$		24	$72 \div 9 =$				
25	$9 \times 9 =$		25	$9 \times 9 =$		25	$99 \div 9 =$		25	$9 \times 9 =$				
Totals			/25			/25			/25				/25	
										Total		/100		

Day 4 – 10 mins

Test 1

Multiplication challenge

Name:

Date:

1	$9 \times 9 =$	1	$9 \times 9 =$	1	$45 \div 9 =$	1	$108 \div 9 =$
2	$0 \times 9 =$	2	$72 \div 9 =$	2	$63 \div 9 =$	2	$9 \times 9 =$
3	$54 \div 9 =$	3	$18 \div 9 =$	3	$5 \times 9 =$	3	$9 \times 3 =$
4	$27 \div 9 =$	4	$0 \times 9 =$	4	$9 \times 9 =$	4	$27 \div 9 =$
5	$9 \times 9 =$	5	$36 \div 9 =$	5	$9 \times 2 =$	5	$6 \times 9 =$
6	$63 \div 9 =$	6	$9 \times 9 =$	6	$81 \div 9 =$	6	$9 \times 9 =$
7	$10 \times 9 =$	7	$9 \times 3 =$	7	$108 \div 9 =$	7	$54 \div 9 =$
8	$12 \times 9 =$	8	$9 \div 9 =$	8	$9 \times 0 =$	8	$45 \div 9 =$
9	$9 \times 9 =$	9	$9 \times 9 =$	9	$9 \times 9 =$	9	$9 \times 9 =$
10	$54 \div 9 =$	10	$99 \div 9 =$	10	$99 \div 9 =$	10	$0 \times 9 =$
11	$9 \times 6 =$	11	$45 \div 9 =$	11	$81 \div 9 =$	11	$18 \div 9 =$
12	$63 \div 9 =$	12	$9 \times 0 =$	12	$27 \div 9 =$	12	$63 \div 9 =$
13	$11 \times 9 =$	13	$9 \times 9 =$	13	$9 \times 5 =$	13	$9 \times 6 =$
14	$12 \times 9 =$	16	$81 \div 9 =$	16	$18 \div 9 =$	16	$45 \div 9 =$
15	$9 \times 0 =$	15	$36 \div 9 =$	15	$5 \times 9 =$	15	$90 \div 9 =$
16	$27 \div 9 =$	16	$9 \times 12 =$	16	$9 \times 9 =$	16	$18 \div 9 =$
17	$9 \times 9 =$	17	$9 \times 9 =$	17	$99 \div 9 =$	17	$5 \times 9 =$
18	$9 \times 3 =$	18	$10 \times 9 =$	18	$54 \div 9 =$	18	$9 \times 3 =$
19	$18 \div 9 =$	19	$9 \times 3 =$	19	$81 \div 9 =$	19	$10 \times 9 =$
20	$6 \times 9 =$	20	$108 \div 9 =$	20	$36 \div 9 =$	20	$9 \times 11 =$
21	$108 \div 9 =$	24	$11 \times 9 =$	24	$6 \times 9 =$	24	$9 \times 9 =$
22	$90 \div 9 =$	22	$32 \div 9 =$	22	$9 \times 9 =$	22	$27 \div 9 =$
23	$36 \div 9 =$	23	$9 \times 6 =$	23	$9 \times 12 =$	23	$99 \div 9 =$
24	$9 \times 5 =$	24	$72 \div 9 =$	24	$0 \times 9 =$	24	$72 \div 9 =$
25	$9 \times 9 =$	25	$9 \times 9 =$	25	$99 \div 9 =$	25	$9 \times 9 =$
Totals		/25		/25		/25	/25
Total				/100			

Day 5 – 15 mins

Test 2

Multiplication challenge

Name:

Date:

1	10x10 =	26	11x5 =	51	7x7 =	76	7x11 =
2	8x3 =	27	3x7 =	52	4x6 =	77	4x5 =
3	3x6 =	28	8x2 =	53	10x8 =	78	9x2 =
4	6x3 =	29	1x1 =	54	3x8 =	79	6x7 =
5	4x4 =	30	10x9 =	55	2x7 =	80	8x5 =
6	9x1 =	31	2x6 =	56	8x0 =	81	5x4 =
7	2x3 =	32	1x12 =	57	5x5 =	82	9x9 =
8	7x11 =	33	8x9 =	58	3x2 =	83	4x12 =
9	7x6 =	34	3x5 =	59	10x1 =	84	4x7 =
10	9x10 =	35	7x5 =	60	4x0 =	85	7x4 =
11	2x1 =	36	2x2 =	61	6x9 =	86	3x0 =
12	12x4 =	37	9x5 =	62	9x3 =	87	3x12 =
13	5x7 =	38	1x3 =	63	6x4 =	88	10x7 =
14	1x5 =	39	3x1 =	64	1x2 =	89	2x5 =
15	10x3 =	40	5x6 =	65	5x9 =	90	2x0 =
16	5x1 =	41	2x8 =	66	10x11 =	91	3x4 =
17	6x2 =	42	8x11 =	67	3x9 =	92	5x0 =
18	1x6 =	43	4x1 =	68	4x2 =	93	9x8 =
19	12x7 =	44	5x2 =	69	7x8 =	94	2x4 =
20	1x7 =	45	10x4 =	70	5x12 =	95	6x0 =
21	7x2 =	46	4x12 =	71	7x3 =	96	12x9 =
22	5x6 =	47	8x4 =	72	9x7 =	97	8x1 =
23	4x8 =	48	5x7 =	73	10x5 =	98	12x8 =
24	6x1 =	49	9x4 =	74	6x6 =	99	10x6 =
25	8x6 =	50	7x0 =	75	6x8 =	100	8x12 =
Totals		/25		/25		/25	/25

Total

/100

The Golden 100

1x3	2x5	4x9	10x6	7x9
8x3	2x7	4x7	10x1	9x9
1x7	2x1	4x4	1x6	7x7
5x3	9x5	4x1	10x10	8x9
1x1	2x6	6x9	4x6	7x3
1x10	2x9	4x5	10x7	7x1
3x3	2x8	4x10	10x5	8x9
1x2	2x10	10x9	10x2	7x5
2x3	1x5	4x2	3x6	3x9
1x4	2x2	1x9	7x6	8x6
1x8	2x4	4x8	10x4	7x4
4x3	8x5	6x5	10x3	7x8
9x3	9x4	3x6	6x6	5x6
8x7	5x5	3x7	10x8	7x2
5x8	9x6	3x2	5x7	7x10
9x7	6x2	3x8	3x10	5x2
5x4	6x4	8x4	9x5	9x1
3x5	6x1	8x8	5x10	3x2
5x1	8x2	8x10	9x2	8x1
9x10	6x8	3x4	6x7	6x10

Last month I scored

Today I scored

My targeted 10 facts to learn are

$15 \div 3 =$

$20 \div 4 =$

$8 \div 4 =$

$6 \times 4 =$

$20 \div 5 =$

$27 \div 3 =$

$20 \div 10 =$

$7 \times 5 =$

$0 \times 4 =$

$2 \times 3 =$

$100 \div 10 =$

$0 \div 2 =$

$12 \div 2 =$

$45 \div 5 =$

$35 \div 5 =$

$35 \div 5 =$

$7 \times 3 =$

$40 \div 4 =$

$8 \times 5 =$

$24 \div 3 =$

$9 \times 5 =$

$21 \div 3 =$

$18 \div 2 =$

$10 \div 5 =$

$9 \times 4 =$

$7 \times 4 =$

$50 \div 5 =$

$12 \div 3 =$

$5 \div 5 =$

$8 \times 5 =$

$25 \div 5 =$

$32 \div 4 =$

$27 \div 3 =$

$24 \div 4 =$

$28 \div 4 =$

$9 \times 3 =$

$9 \times 3 =$

$16 \div 4 =$

$10 \div 2 =$

$6 \times 5 =$

$25 \div 5 =$

$5 \times 4 =$

$72 \div 12 =$

$64 \div 8 =$

$45 \div 9 =$

$121 \div 11 =$

$45 \div 5 =$

$8 \times 9 =$

$42 \div 7 =$

$63 \div 7 =$

$27 \div 3 =$

$72 \div 8 =$

$18 \div 3 =$

$56 \div 8 =$

$54 \div 9 =$

$30 \div 6 =$

$9 \times 9 =$

$35 \div 7 =$

$6 \times 9 =$

$36 \div 6 =$

$48 \div 8 =$

$7 \times 8 =$

$40 \div 4 =$

$8 \times 8 =$

$49 \div 7 =$

$8 \times 6 =$

$32 \div 8 =$

$4 \times 8 =$

$32 \div 8 =$

$27 \div 9 =$

$81 \div 9 =$

$6 \times 7 =$

$28 \div 7 =$

$32 \div 4 =$

$63 \div 9 =$

$4 \times 9 =$

$28 \div 4 =$

$7 \times 9 =$

$54 \div 6 =$

$63 \div 7 =$

$28 \div 7 =$

$48 \div 6 =$

$56 \div 8 =$

$8 \times 7 =$

Name: _____

Multiplication Scramble

Unscramble each set of digits to create a multiplication fact.

examples:

3	4
2	1

answer: $3 \times 4 = 12$

6	6	1
0	0	

answer: $10 \times 6 = 60$

3	2
1	7

answer: _____

1	4	8
7	2	

answer: _____

	1	0
0	9	9

answer: _____

1	1	5
5	5	

answer: _____

1	1	1	1
	1	1	2

answer: _____

	9	8
1	9	

answer: _____

0	0
	1

answer: _____

3	2	1	1
1	2	1	

answer: _____

Name: _____

Basic Multiplication Facts: 0-

Missing Factors

a.
$$\begin{array}{r} 11 \\ \times \square \\ \hline 121 \end{array}$$

b.
$$\begin{array}{r} 7 \\ \times \square \\ \hline 21 \end{array}$$

c.
$$\begin{array}{r} \square \\ \times 9 \\ \hline 54 \end{array}$$

d.
$$\begin{array}{r} 8 \\ \times \square \\ \hline 56 \end{array}$$

e.
$$\begin{array}{r} 12 \\ \times \square \\ \hline 72 \end{array}$$

f.
$$\begin{array}{r} \square \\ \times 8 \\ \hline 24 \end{array}$$

g.
$$\begin{array}{r} \square \\ \times 6 \\ \hline 42 \end{array}$$

h.
$$\begin{array}{r} \square \\ \times 4 \\ \hline 16 \end{array}$$

i.
$$\begin{array}{r} \square \\ \times 3 \\ \hline 18 \end{array}$$

j.
$$\begin{array}{r} \square \\ \times 3 \\ \hline 33 \end{array}$$

k.
$$\begin{array}{r} 7 \\ \times \square \\ \hline 49 \end{array}$$

l.
$$\begin{array}{r} 12 \\ \times \square \\ \hline 48 \end{array}$$

m.
$$\begin{array}{r} 4 \\ \times \square \\ \hline 24 \end{array}$$

n.
$$\begin{array}{r} \square \\ \times 8 \\ \hline 96 \end{array}$$

o.
$$\begin{array}{r} 10 \\ \times \square \\ \hline 100 \end{array}$$

p.
$$\begin{array}{r} \square \\ \times 1 \\ \hline 0 \end{array}$$

q.
$$\begin{array}{r} \square \\ \times 8 \\ \hline 48 \end{array}$$

r.
$$\begin{array}{r} 11 \\ \times \square \\ \hline 132 \end{array}$$

s.
$$\begin{array}{r} \square \\ \times 9 \\ \hline 27 \end{array}$$

t.
$$\begin{array}{r} 12 \\ \times \square \\ \hline 144 \end{array}$$

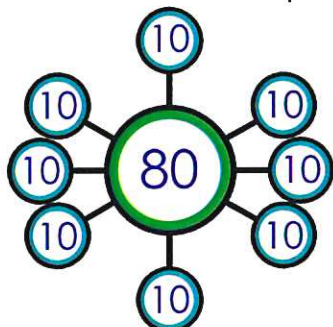
Name: _____

Number Bonds

Multiplication & Division

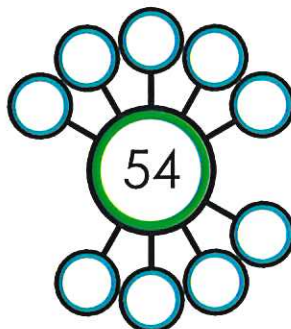
Use multiplication and division to fill in the missing number or numbers of each number bond. Write the fact in the space provided.

a.

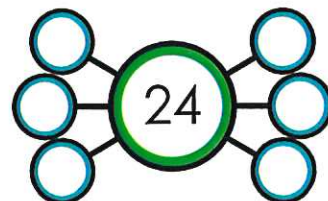


$8 \times 10 = 80$

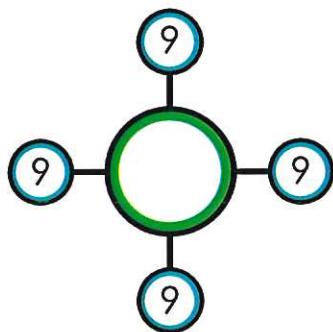
b.



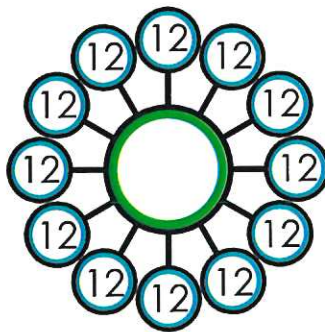
c.



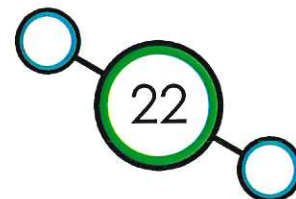
d.



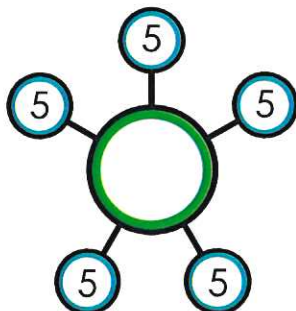
e.



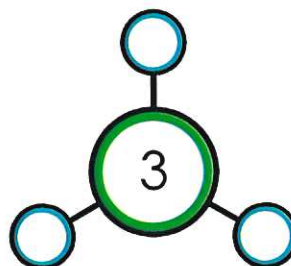
f.



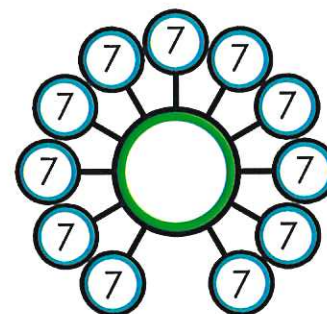
g.



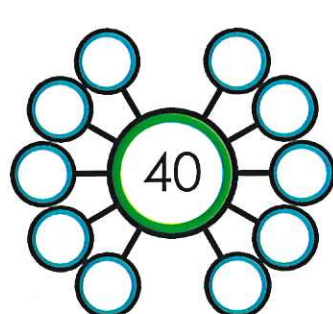
h.



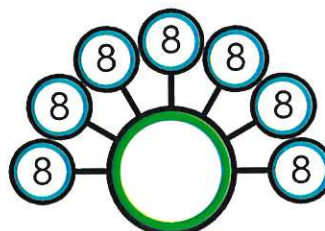
i.



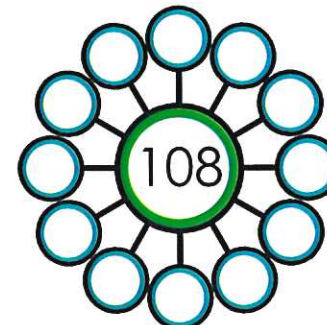
j.



k.

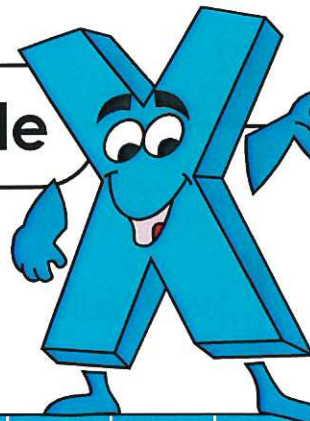


l.



Name: _____

Mixed-Up Multiplication Table



Help Multiplication MaX fill in the empty squares.

	2	5	9	12	0	6	7	10	3	8	1	11	4
12									36		12		
1				12									4
5											5		
0									0				
8	16						56					88	
2													
4			36					40					
11						66							
7								70					
10										80			
3				36								33	
9							63						
6		30		72									

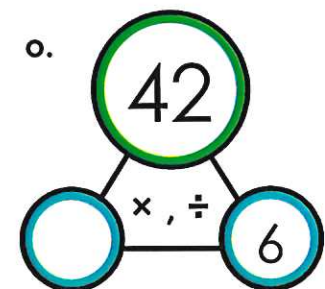
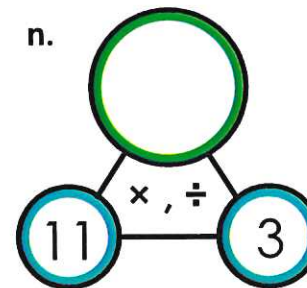
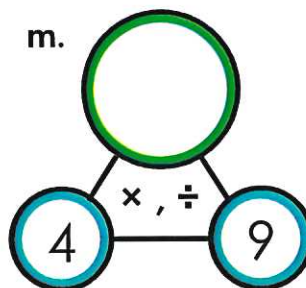
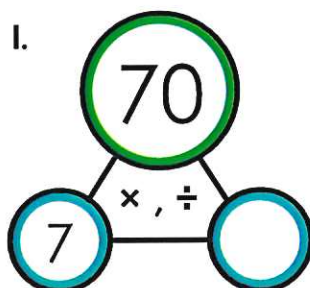
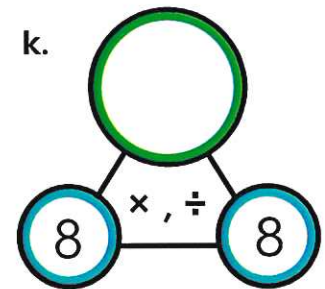
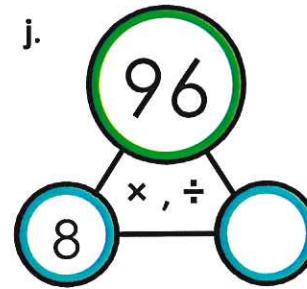
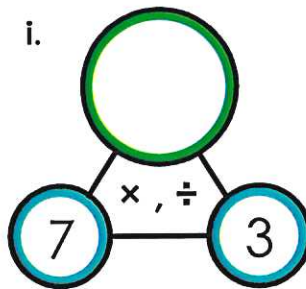
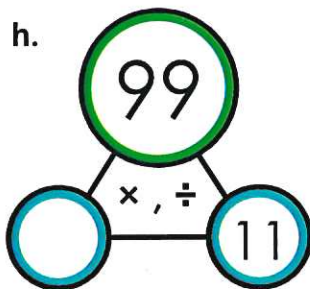
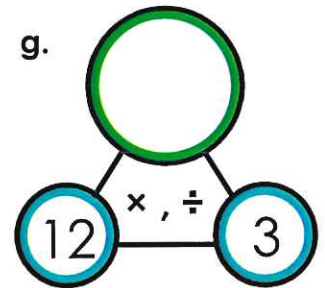
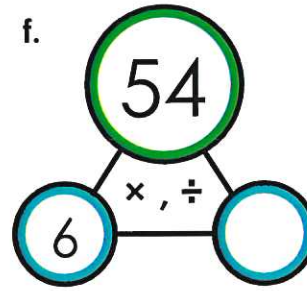
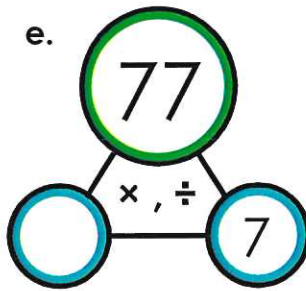
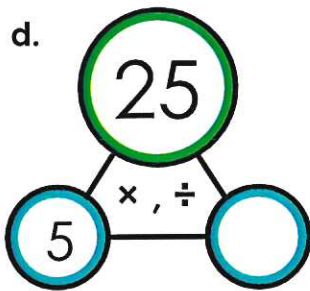
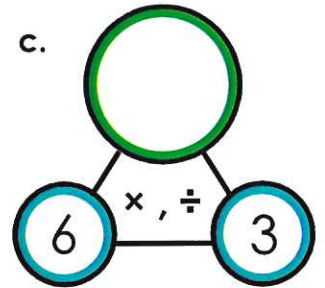
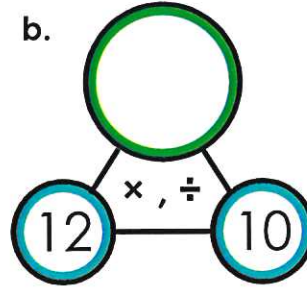
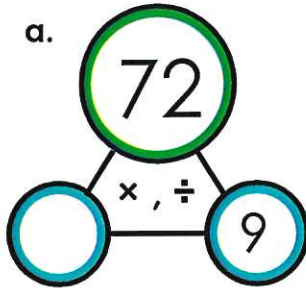
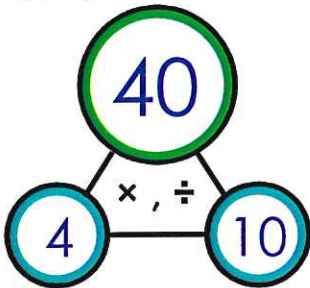
Name: _____

Fact Families

Multiplication and Division

Use multiplication and division to fill in the missing number of each fact family.

example:



Name: _____

Fact Family Street

Use multiplication and division to fill in the fact family living in each house.

a.

32
x, ÷
8 4

8	x	4	=	32
4	x	8	=	32
32	÷	8	=	4
32	÷	4	=	8

b.

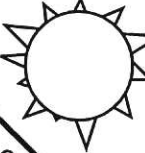
132
x, ÷
12 11

	x		=	
	x		=	
	÷		=	
	÷		=	

c.

21
x, ÷
7 3

	x		=	
	x		=	
	÷		=	
	÷		=	



d.


120
x, ÷
12 10

	x		=	
	x		=	
	÷		=	
	÷		=	

e.

36
x, ÷
9 4

	x		=	
	x		=	
	÷		=	
	÷		=	



f.


54
x, ÷
9 6

	x		=	
	x		=	
	÷		=	
	÷		=	

g.

12
x, ÷
4 3

	x		=	
	x		=	
	÷		=	
	÷		=	



h.

56
x, ÷
8 7

	x		=	
	x		=	
	÷		=	
	÷		=	

i.

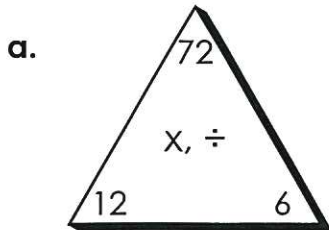
66
x, ÷
11 6

	x		=	
	x		=	
	÷		=	
	÷		=	

Name: _____

Fact Families

Use multiplication and division to write the fact family for each.

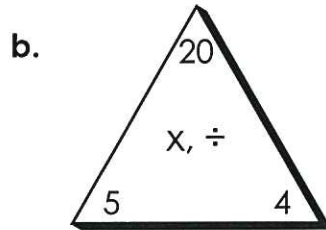


____ X ____ = ____

____ X ____ = ____

____ ÷ ____ = ____

____ ÷ ____ = ____

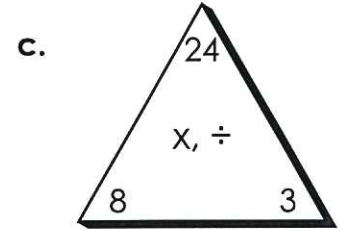


____ X ____ = ____

____ X ____ = ____

____ ÷ ____ = ____

____ ÷ ____ = ____



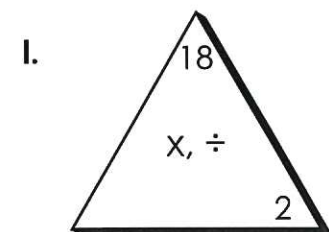
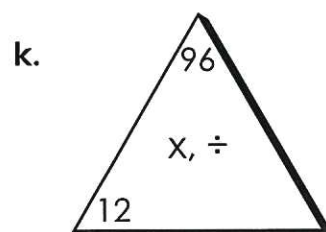
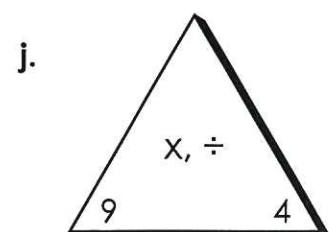
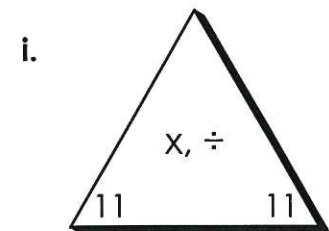
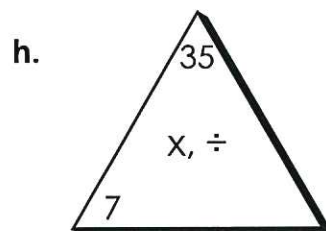
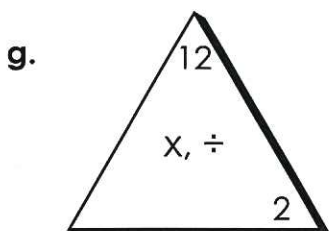
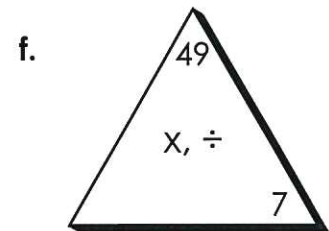
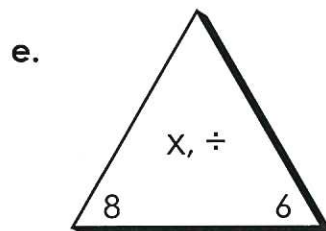
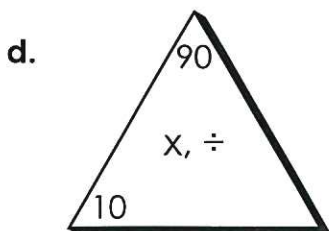
____ X ____ = ____

____ X ____ = ____

____ ÷ ____ = ____

____ ÷ ____ = ____

Use multiplication and division to fill in the missing fact in each family.

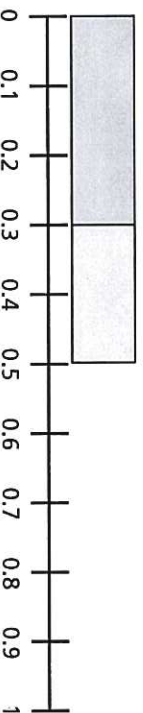


Adding decimals within 1

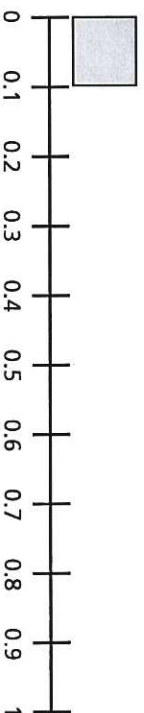
1

Work out the additions.
Use the number lines to help you.

a) $0.3 + 0.2 =$



b) $0.1 + 0.4 =$



c) $0.2 + 0.1 + 0.2 =$



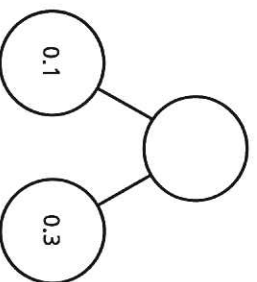
What do you notice about your answers?



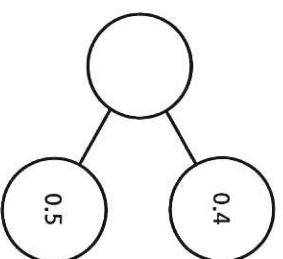
2

Complete the part-whole models.

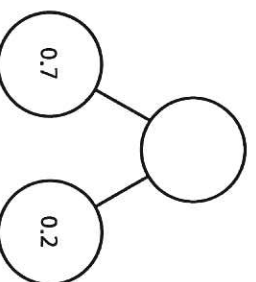
a)



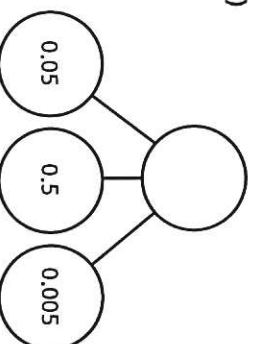
c)



b)



d)



3

Complete the additions.

Use the place value charts to help you.

a) $0.42 + 0.3 =$

Ones	Tenths	Hundredths
	<div>0.1</div> <div>0.1</div> <div>0.1</div> <div>0.1</div>	<div>0.01</div> <div>0.01</div>
	<div>0.1</div> <div>0.1</div> <div>0.1</div>	

b) $0.28 + 0.32 =$

Ones	Tenths	Hundredths

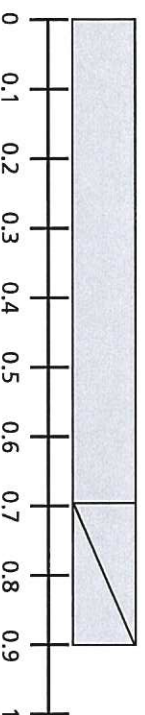


Subtracting decimals within 1

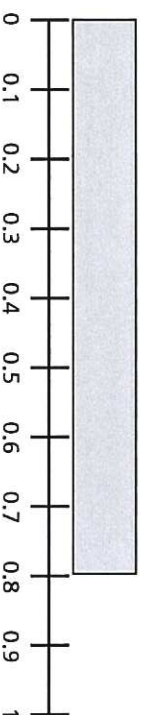
1

Work out the subtractions.
Use the number lines to help you.

a) $0.9 - 0.2 =$



b) $0.8 - 0.1 =$



c) $1 - 0.2 - 0.1 =$

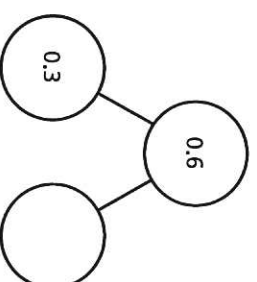


What do you notice about your answers?

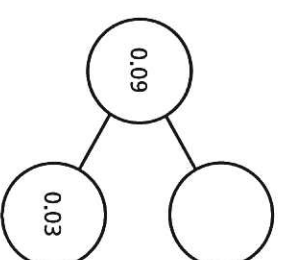
2

Complete the part-whole models.

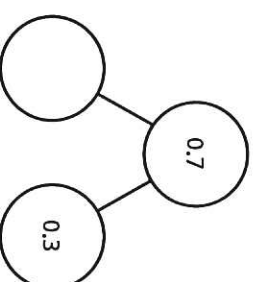
a)



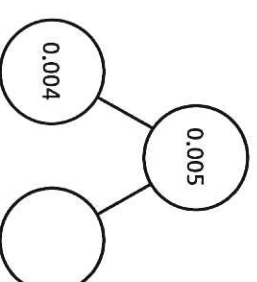
c)



b)



d)



3

Complete the subtractions.

Use the place value charts to help you. The first one has been started for you.

a) $0.42 - 0.3 =$

Ones	Tenths	Hundredths
	<div>0.1</div> <div>0.1</div> <div>0.1</div>	<div>0.01</div> <div>0.01</div>

b) $0.28 - 0.05 =$

Ones	Tenths	Hundredths
	<div>0.1</div> <div>0.1</div>	<div>0.01</div> <div>0.01</div> <div>0.01</div> <div>0.01</div> <div>0.01</div> <div>0.01</div>

- 4 Use the column method to work out the subtractions.

d)

			0	.	8		9
			-		0	.	4
						.	

c)

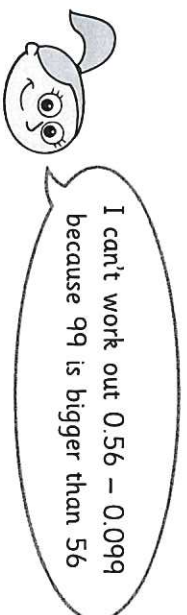
			0	.	7		7
			-		0	.	6
							8
						.	

b)

			0	.	7		7
			-		0	.	6
							4
						.	

d)

			0	.	7		
			-		0	.	2
							5
						.	



Do you agree with Eva? _____

Work out the answer to $0.56 - 0.099$

- 6 Find the difference between 53 hundredths and 8 tenths.

Give your answer as a decimal.

The difference between 53 hundredths and 8 tenths is

- 7 A piece of wood is 0.9 metres long.

It is cut into 3 unequal pieces.

The first piece is 0.2 metres longer than the second piece.

The third piece is 23 hundredths of a metre shorter than the second piece.



How long is each piece of wood?

1st = 2nd = 3rd =

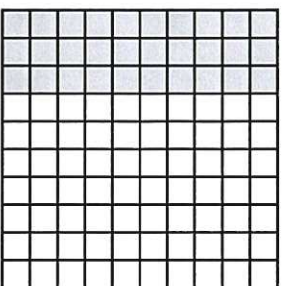
Complements to 1

1

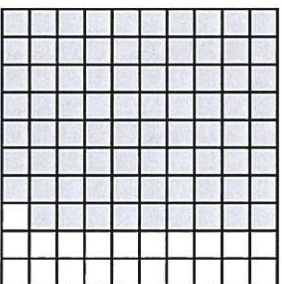
Each hundred square represents one whole.

Use the hundred squares to help you complete the additions.

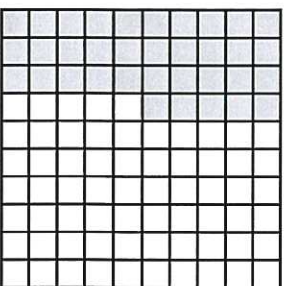
a) $0.3 + \square = 1$



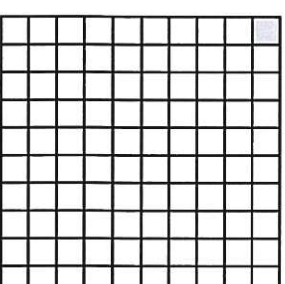
c) $1 = \square + 0.79$



b) $0.35 + \square = 1$



d) $\square + 0.01 = 1$

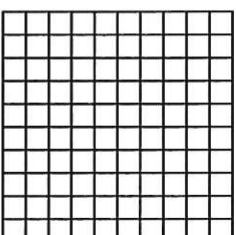


2

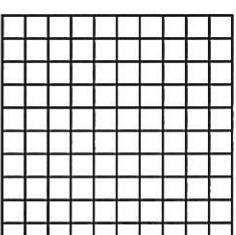
Complete the calculations.

Shade the hundred squares to help you.

a) $1 = 0.47 + \square$



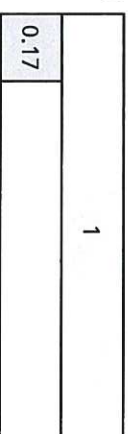
b) $0.02 + 0.2 + \square = 1$



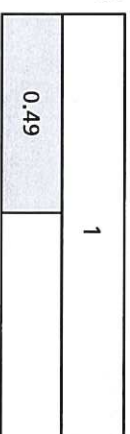
3

Complete the bar models.

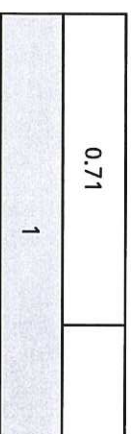
a)



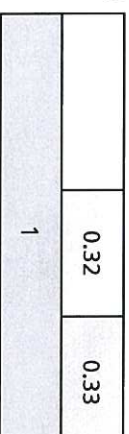
b)



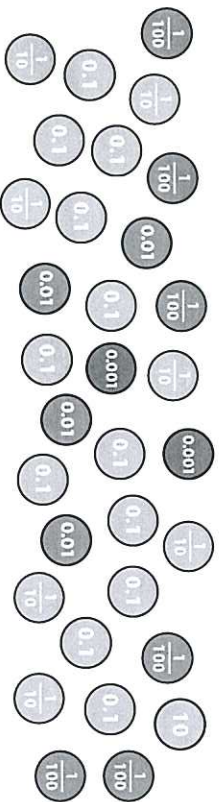
c)



d)



- 4 Teddy has these counters.



He wants to exchange these for as many 1s counters as possible.

How many 1s counters can he collect?

- 5 Complete the additions.

$$54 + \boxed{} = 100$$

$$5.4 + \boxed{} = 10$$

$$0.54 + \boxed{} = 1$$

$$0.054 + \boxed{} = 0.1$$

What is the same and what is different about your answers?

- 6 Complete the sentences.

a) 6 tenths + tenths = 1 whole

b) 23 hundredths + hundredths = 1 whole

c) 2 tenths + hundredths + tenths = 1 whole

- 7 Match the pairs of decimals that add together to make 1 whole.

0.12	0.988
0.21	0.79
0.212	0.778
0.012	0.788
0.222	0.88

- 8 Mo has completed these calculations.

- a) $0.22 + 0.88 = 1$
 b) $0.39 + 0.71 = 1$
 c) $0.677 + 0.433 = 1$

He has got them all incorrect.
 What mistake has Mo made?

Correct Mo's calculations.

a) $0.22 + \boxed{} = 1$ c) $0.677 + \boxed{} = 1$

b) $0.39 + \boxed{} = 1$



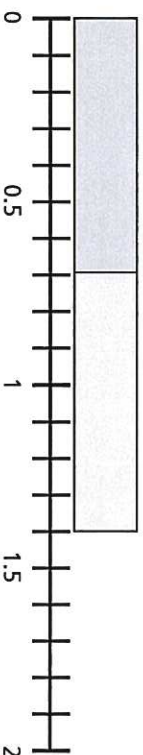
Adding decimals – crossing the whole



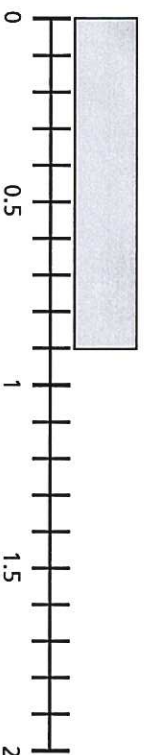
1

Work out the totals of these decimals.
Use the number lines to help you.

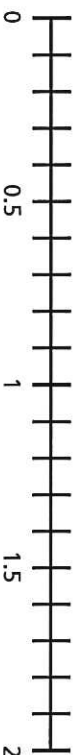
a) $0.7 + 0.7 =$



b) $0.9 + 0.45 =$



c) $0.6 + 0.8 + 0.15 =$



2

Complete the additions.

a) $0.74 + 0.36 =$

Ones	Tenths	Hundredths
	<div>0.1</div> <div>0.1</div> <div>0.1</div> <div>0.1</div> <div>0.1</div>	<div>0.01</div> <div>0.01</div> <div>0.01</div> <div>0.01</div>
	<div>0.1</div> <div>0.1</div> <div>0.1</div>	
	<div>0.1</div> <div>0.1</div> <div>0.1</div>	<div>0.01</div> <div>0.01</div> <div>0.01</div> <div>0.01</div>
		<div>0.01</div> <div>0.01</div>

		0	•	7	4
		+	0	•	3
					6

b) $0.86 + 0.68 =$

Ones	Tenths	Hundredths
	<div>0.1</div> <div>0.1</div> <div>0.1</div> <div>0.1</div> <div>0.1</div>	<div>0.01</div> <div>0.01</div> <div>0.01</div> <div>0.01</div>
	<div>0.1</div> <div>0.1</div> <div>0.1</div> <div>0.1</div>	<div>0.01</div>
	<div>0.1</div> <div>0.1</div> <div>0.1</div>	<div>0.01</div> <div>0.01</div> <div>0.01</div> <div>0.01</div>
	<div>0.1</div> <div>0.1</div>	<div>0.01</div> <div>0.01</div>

		0	•	8	6
		+	0	•	6
					8



3

Use the column method to work out the additions.

a)

			0	•	4		2
			+		0	•	6
							9

e)

			0	•	2		2
			+		0	•	8
							7
							6

b)

			0	•	4		1
			+		0	•	7

f)

			0	•	5		
			+		0	•	7
							7

c)

			0	•	9		6
			+		0	•	9
							7

g)

			0	•	7		5
			+		0	•	3
							2

d)

			0	•	3		
			+		0	•	8
							0
							4

h)

			0	•	6		0
			+		0	•	5
							1
							9

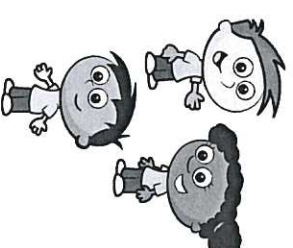
4

Teddy runs 0.32 km.

Amir runs half a kilometre.

Whitney runs 0.47 km.

a) How far do they run altogether?



km

b) Jack runs 7 tenths of a kilometre further than Whitney.

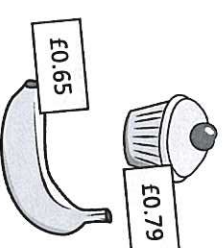
How far does Jack run?

km

5

Ron buys all these items plus a drink costing ninety-five pence.

How much does Ron spend in total?



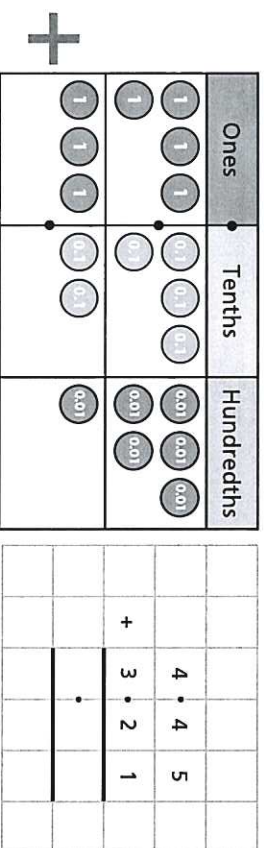
Ron spends £ in total.

Adding decimals with the same number of decimal places

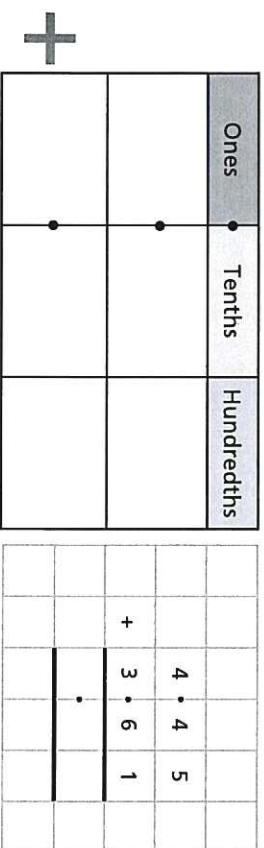
1 Complete the additions.

Use the place value charts to help you.

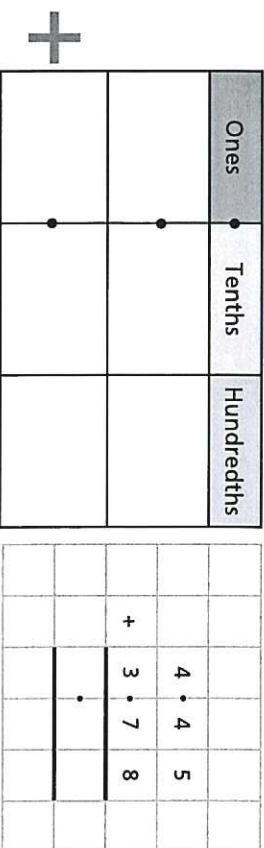
a) $4.45 + 3.21 =$



b) $4.45 + 3.61 =$



c) $4.45 + 3.78 =$



Which calculation was easier? Talk about it with a partner.

2 Use the column method to work out the additions.

a)
$$\begin{array}{r} 5.3 \\ + 2.5 \\ \hline \end{array}$$

e)
$$\begin{array}{r} 3.102 \\ + 5.876 \\ \hline \end{array}$$

b)
$$\begin{array}{r} 6.03 \\ + 3.91 \\ \hline \end{array}$$

f)
$$\begin{array}{r} 12.034 \\ + 9.227 \\ \hline \end{array}$$

c)
$$\begin{array}{r} 2.32 \\ + 1.017 \\ \hline \end{array}$$

g)
$$\begin{array}{r} 5.75 \\ + 5.32 \\ \hline \end{array}$$

d)
$$\begin{array}{r} 6.37 \\ + 6.26 \\ \hline \end{array}$$

h)
$$\begin{array}{r} 14.99 \\ + 12.37 \\ \hline \end{array}$$



3

Work out the calculations.

Write $<$, $>$ or $=$ to make the statements correct.

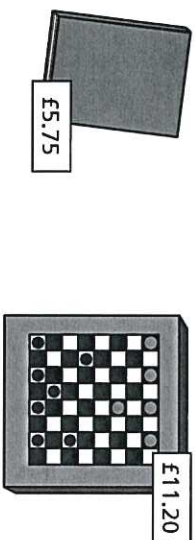
a) $0.64 + 4.79$ $5.01 + 0.23$

b) $7.427 + 3.238$ $5.427 + 5.832$

c) $3.08 + 4.63$ $4.84 + 2.87$

4

Teddy is working out the total cost of these items.



Here are his workings.

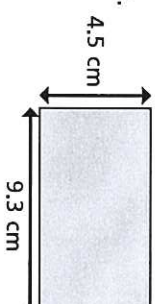
$$\begin{array}{r} 5 \cdot 7 \quad 5 \\ + \quad 1 \quad 1 \cdot 2 \quad 0 \\ \hline 6 \quad 8 \cdot 7 \quad 0 \end{array}$$

Talk to a partner about Teddy's mistake.

Work out the correct answer.

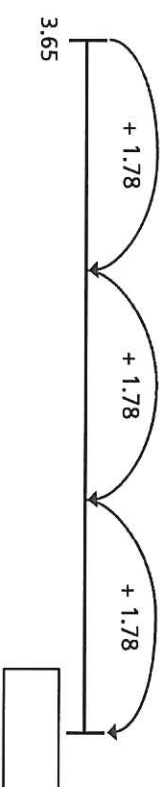
5

Work out the perimeter of the shape.

perimeter = cm

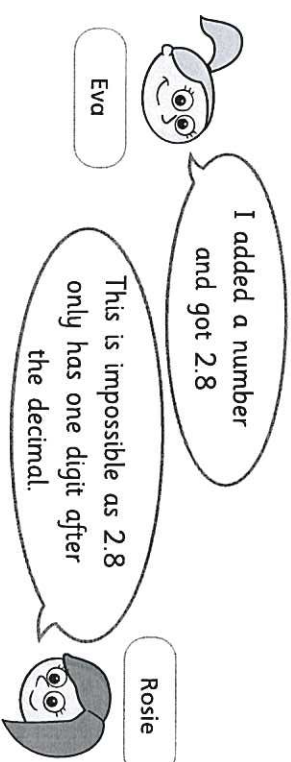
6

Complete the number line.



7

Eva starts with the number 1.62



Is Rosie correct? _____

Talk about it with a partner.

- 



-

- | | |
|----------------------------|-------|
| 1 ten can be exchanged for | ones. |
|----------------------------|-------|

1 one can be exchanged for	tenths.
----------------------------	---------

1 tenth can be exchanged for 10 _____.

-	2	•	3	4	1	2
	1	•	1		7	
	1	•	2		5	

How does the place value chart support the column method?
Talk about it with a partner.

- 

- | | | | | | | | |
|--|--|--|-------|---|---|---|--|
| | | | | | | | |
| | | | | | | | |
| | | | - | | | | |
| | | | 3 | • | 6 | 4 | |
| | | | 1 | • | 2 | | |
| | | | <hr/> | | | | |
| | | | . | | | | |
| | | | <hr/> | | | | |
| | | | | | | | |
| | | | | | | | |

- [illegible]

- | | | | | | | | |
|--|--|---|-------|---|---|--|---|
| | | | | | | | |
| | | | 5 | • | 6 | | 4 |
| | | - | 3 | • | 1 | | 5 |
| | | | <hr/> | | • | | |
| | | | <hr/> | | | | |

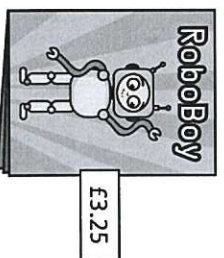
- [illegible]

5

Whitney has £8.52

She buys this comic.

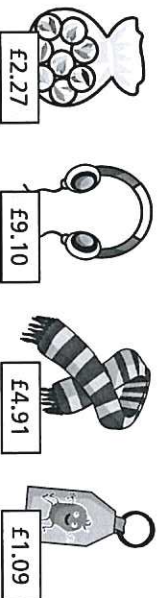
How much money does she have left?



£

6

Here are some items for sale in a shop.



a) How much more does a scarf cost than a bag of marbles?

b) Esther has £15.31

She buys a pair of headphones and a bag of marbles.

How much money does she have left?

£

c) Tom has £7.01

He buys one item and has £5.92 left.

What did he buy?

£

Tom bought _____.

7

Ron and Dora are doing a sponsored walk.

Ron walks 3.12 miles.

Dora walks 5.49 miles.

How much further does Dora walk than Ron?

Dora walks miles further than Ron.

8

Tommy has three pieces of string.

- The first piece is 0.78 m long.
- The second piece is 0.24 m shorter than the first piece.
- The third piece is 0.07 m shorter than the second piece.

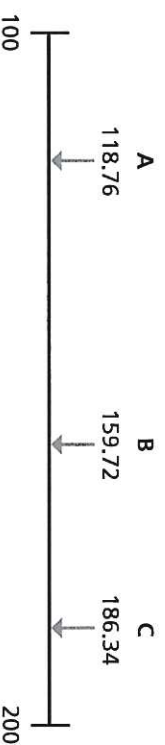
What is the total length of all three pieces of string?

Give your answer in metres and centimetres.

m and cm

9

A, B and C are points on a number line.



How much greater is the difference between A and C than the difference between B and C?






Compare methods with a partner.

Adding decimals with a different number of decimal places



1 Ron is adding 1.4 and 2.53

He makes each number with counters.

Ones	Tenths	Hundredths
		
		

- What is the answer to Ron's calculation?
- Explain your method to a partner.
- Did you have to make an exchange? _____.

2 Work out the additions.

a)

		3	•	0	2	
		+		1	•	6

c)

		2	•	8			
		+		3	•	4	5

b)

		1	3	•	5		
		+		0	•	2	3

d)

						6	.	1	5
					+			1	
								3	
								.	
								9	

3

Filip is adding two numbers together.
He writes it as a column addition.

$$\begin{array}{r} 1 \quad 3 \cdot 8 \\ + \quad 1 \cdot 9 \quad 5 \\ \hline 3 \cdot 3 \quad 3 \\ \hline 1 \quad 1 \end{array}$$

a) What mistake has Filip made?

b) Use the column method to work out the correct answer.

4

Use the column method to work out the additions.
a) $2.36 + 1.9$ b) $14.82 + 3.7$

5

Use the column method to work out the additions.

a) $0.59 + 11.9$

c) $0.591 + 1.73$

b) $77.34 + 1.82$

d) $3.2 + 1.84 + 0.931$

6

Mr Hall drives from point A to point B, then on to point C.



What is the total distance that Mr Hall drives?

 km

7

Here are four number cards.

3.8

4.19

0.72

11.46

a) What is the greatest total you can make by adding two of the numbers?

Complete the calculation.

 + =

b) What is the sum of the four numbers?

8

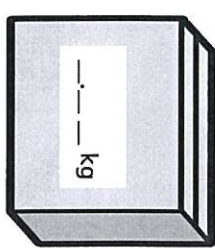
Work out the missing digits.

a) $\underline{\quad}4.3 + 1.\underline{\quad}.37 = 39.67$

b) $4.8\underline{\quad} + \underline{\quad}.\underline{\quad} = 12.65$

9

The total mass of the two boxes is 10.85 kg.
What could the mass of each box be?



How many answers can you find?

Subtracting decimals with a different number of decimal places

1 Use the place value chart to help you work out the subtractions.

Ones	Tenths	Hundredths
●●●●	●●●	●●●●

a)

5	3	6
-	1	2
●		

c)

5	3	6
-	3	8
●		

b)

5	3	6
-	3	5
●		

d)

5	3	6
-	4	7
●		

3 Complete the subtractions.

a)

2	3	6
-	1	4
●		

c)

b)

6	1	5
-	3	8
●		

d)

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4 Use the column method to work out the subtractions.

a) $13.59 - 1.82$

c) $5.6 - 1.39$

b) $73.84 - 9.2$

d) $18.2 - 3.64$



I can't do this as I don't have any hundredths counters.

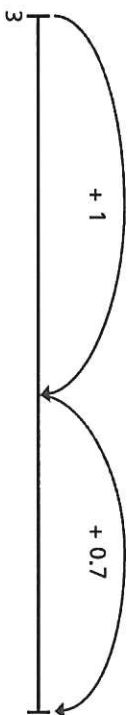
Do you agree with Alex? _____
Talk about it with a partner.

Adding and subtracting wholes and decimals

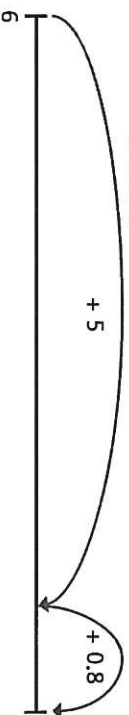


1 Use the number lines to help you work out the additions.

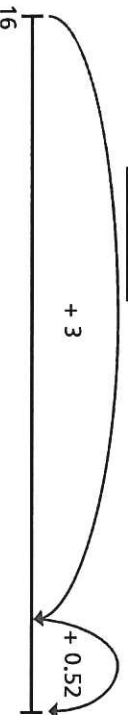
a) $3 + 1.7 = \square$



b) $6 + 5.8 = \square$



c) $16 + 3.52 = \square$



2 Mo and Dexter are trying to add 3.9 and 4 in their heads.



I started at 4 and added 3 and then added 0.9

Mo



I started at 3.9 and added 4

Dexter

Whose method do you prefer? _____
Talk about it with a partner.

3 Kim has used the column method to work out $15 + 3.89$

What other methods could you use to work out $15 + 3.89$?

	1	5	0	0
+		3	8	9
	1	8	8	9

4 Work out the calculations in your head.

a) $7 + 2.8 = \square$

f) $8.3 + 17 = \square$

b) $5 + 3.6 = \square$

g) $8.8 - 5 = \square$

c) $2.8 + 15 = \square$

h) $15.2 - 3 = \square$

d) $8 + 3.9 = \square$

i) $12.8 - 7 = \square$

e) $25 + 6.8 = \square$

j) $63.2 - 6 = \square$

5 Complete the additions.

a) $6 + 1.83 = \square$

e) $4.5 + \square = 9.5$

b) $7 + 5.82 = \square$

f) $4.5 + \square = 19.5$

c) $3.95 + 29 = \square$





g) $6 + \square = 9.7$

d) $2 + 5 + 6.3 = \square$

h) $\square + 6 = 15.32$

6

Work out the cost of the items.

coffee	£3	
tea	£2.35	
cake	£4	
muffin	£1.95	
hot chocolate	£1.99	

a) coffee and a muffin

£

b) a slice of cake and hot chocolate

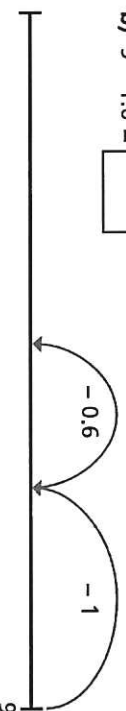
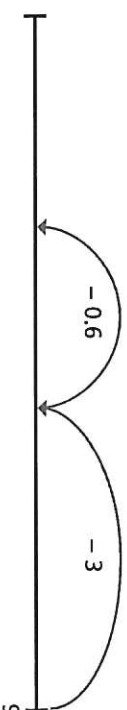
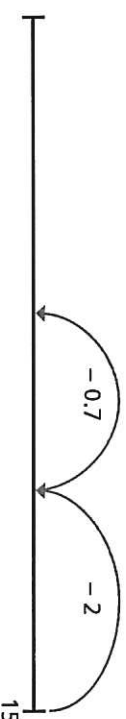
£

c) coffee, tea and 2 slices of cake

£

7

Use the number lines to help you work out the subtractions.

a) $9 - 0.6 =$ b) $9 - 1.6 =$ c) $9 - 3.6 =$ d) $15 - 2.7 =$ 

8

Complete the subtractions.

a) $8 - 2.9 =$ d) $12 - 4.5 =$ b) $16 - 3.5 =$ e) $14 - 7.8 =$ c) $28 - 7.3 =$ f) $32 - 9.2 =$

9

Annie has worked out $12 - 4.8$ in her head.

The answer is 8.2

Annie

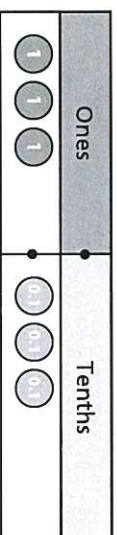
What mistake has Annie made?

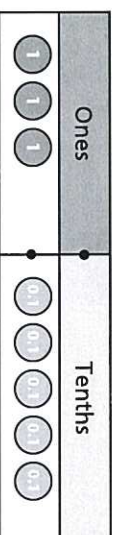
Talk about it with a partner.

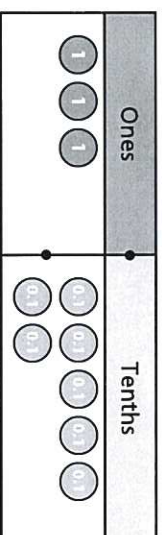
Decimal sequences

1 Esther has made a sequence with place value counters.

a) Write the numbers she has made.

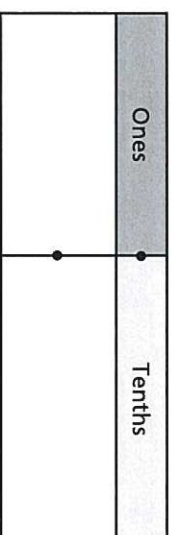






b) She adds the same counters again.

Draw counters to show the number she has made.



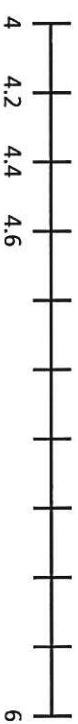
c) She adds the same counters again.

What number is shown in her chart now?

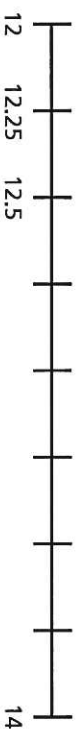
d) Explain the pattern of numbers that Esther has made.

2 Complete the number lines.

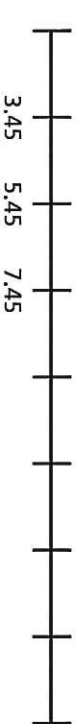
a)



b)

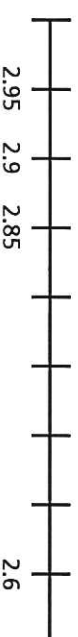


c)



Discuss with your partner how each number line increases.

3 Complete the number line.

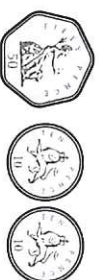


How is this number line different from those in question 2?

4

Rosie saves money in her money box.

Each day she puts in 70 pence.



At the start of the week there is £2.80 in her money box.

a) Complete the table to show how much is in the money box at the end of each day.

Day	Mon	Tues	Wed	Thur	Fri	Sat	Sun
Money in money box							

b) Rosie wants to buy a book costing £10

For how many more days does Rosie need to save 70p?

5

Dexter has £12 on Monday morning.

Every day he spends 75p on a snack.

On what day of the week will he run out of money?

6

Write the rule and the next four terms in each sequence.

a) The rule is _____.

2.36	2.39	2.42					
------	------	------	--	--	--	--	--

b) The rule is _____.

15.6	16.1	16.6					
------	------	------	--	--	--	--	--

c) The rule is _____.

19	18.4	17.8				
----	------	------	--	--	--	--

d) The rule is _____.

10.35	10.15	9.95				
-------	-------	------	--	--	--	--

7

Mo and Eva are making number sequences.

a) Mo is adding 1.5 each time.

He starts with the number 3.8

What is the first number greater than 12 that he makes?

b) Will the number 15.7 be in Mo's sequence?

c) Eva's sequence decreases by 2 hundredths each time.

She picks a number to start with.

What is the difference between the 3rd and 6th number in her sequence?

Multiplying decimals by 10, 100 and 1,000



1 Complete the multiplications.

a)

H	T	O	Tths	Hths
		3	7	

$3.7 \times 10 = \square$

b)

H	T	O	Tths	Hths
	1	4	5	

$14.5 \times 10 = \square$

c)

H	T	O	Tths	Hths
		1	5	8

$1.58 \times 10 = \square$

d)

H	T	O	Tths	Hths
	1	3	0	6

$13.06 \times 10 = \square$

What do you notice when you multiply a number by 10?

2 Complete the multiplications.

a) $1.7 \times 10 = \square$

d) $13.4 \times 10 = \square$

b) $1.75 \times 10 = \square$

e) $10 \times 13.04 = \square$

c) $1.73 \times 10 = \square$

f) $130.4 \times 10 = \square$

3 Complete the multiplications.

a)

H	T	O	Tths	Hths
		4	1	

$4.1 \times 100 = \square$

b)

H	T	O	Tths	Hths
		4	1	5

$4.15 \times 100 = \square$

c)

H	T	O	Tths	Hths
	1	4	5	

$14.5 \times 100 = \square$

d)

H	T	O	Tths	Hths
		4	0	5

$4.05 \times 100 = \square$

What do you notice when you multiply a number by 100?

4 Complete the calculations.

a) $7.2 \times 100 = \square$

d) $1.89 \times 100 = \square$

b) $3.4 \times 100 = \square$

e) $73.57 \times 100 = \square$

c) $19.5 \times 100 = \square$

f) $1.317 \times 100 = \square$

- 5 Amir has multiplied 3.8 by 1,000



The answer is 3.8000

- a) What mistake has Amir made?

- b) Work out the correct answer.

$$3.8 \times 1,000 = \boxed{}$$

- 6 Complete the multiplications.

a) $4.7 \times 10 = \boxed{}$

c) $5.84 \times 10 = \boxed{}$

$$4.7 \times 100 = \boxed{}$$

$$5.84 \times 100 = \boxed{}$$

$$4.7 \times 1,000 = \boxed{}$$

$$5.84 \times 1,000 = \boxed{}$$

b) $19.3 \times 10 = \boxed{}$

d) $18.06 \times 10 = \boxed{}$

$$19.3 \times 100 = \boxed{}$$

$$100 \times 18.06 = \boxed{}$$

$$1,000 \times 19.3 = \boxed{}$$

$$18.06 \times 1,000 = \boxed{}$$

How did you work out the answers? Talk to a partner.

- 7 Complete the calculations.

a) $7.7 \times \boxed{} = 770$

e) $8.032 \times \boxed{} = 80.32$

b) $\boxed{} \times 10 = 1,950$

f) $\boxed{} \times 18.3 = 1,830$

c) $11.5 \times \boxed{} = 115$

g) $195.32 \times \boxed{} = 1,953.2$

d) $\boxed{} \times 11.5 = 11,500$

h) $\boxed{} \times 1,000 = 7,200$

- 8 Tommy is 1.4 m tall.

A tree is 10 times as tall as Tommy.

A building is 100 times as tall as Tommy.

- a) How tall is the tree?

$\boxed{}$ m

- b) How much taller is the building than the tree?

$\boxed{}$ m

- 9 Match the multiplications to the descriptions.

$$\times 10 \times 10$$

multiply by 10

$$\times 10 \times 10 \times 10$$

$$\times 100 \times 10$$

multiply by 100

$$\times 10 \times 100$$

$$\times 10 \times 1$$

multiply by 1,000

Dividing decimals by 10, 100 and 1,000



1 Complete the divisions.

a)

H	T	O	Tths	Hths
		5		

$$5 \div 10 = \square$$

b)

H	T	O	Tths	Hths
	1	5		

$$15 \div 10 = \square$$

c)

H	T	O	Tths	Hths
		3	8	

$$3.8 \div 10 = \square$$

d)

H	T	O	Tths	Hths
	1	3	8	

$$13.8 \div 10 = \square$$

What do you notice when you divide a number by 10?

2 Complete the calculations.

a) $7 \div 10 = \square$

d) $16 \div 10 = \square$

b) $7.8 \div 10 = \square$

e) $16.4 \div 10 = \square$

c) $7.86 \div 10 = \square$

f) $16.48 \div 10 = \square$

3 Complete the divisions.

a)

H	T	O	Tths	Hths	Thths
	1	7			

$$17 \div 100 = \square$$

b)

H	T	O	Tths	Hths	Thths
		9	4		

$$9.4 \div 100 = \square$$

c)

H	T	O	Tths	Hths	Thths
2	7	6			

$$276 \div 100 = \square$$

d)

H	T	O	Tths	Hths	Thths
	3	2	5		

$$32.5 \div 100 = \square$$

What do you notice when you divide a number by 100?

4 Complete the divisions.

a) $7 \div 100 = \square$

b) $109 \div 100 = \square$

$7.2 \div 100 = \square$

$10.9 \div 100 = \square$

$7.25 \div 100 = \square$

$10.95 \div 100 = \square$

5

Use a place value chart to work out $136 \div 1,000$

H	T	O	Tths	Hths	Thths
1	3	6			

Complete the calculation.

$$136 \div 1,000 = \square$$

Talk to a partner about your method.

6

Use your knowledge of measure to work out the answers.

a) What is the mass of the box in kilograms?

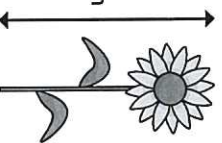
$$\square \div \square = \square$$



b) What is the height of the sunflower in metres?

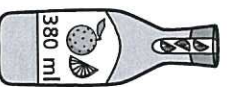
$$\square \div \square = \square$$

235 cm



c) What is the amount of juice in litres?

$$\square \div \square = \square$$



7

Complete the calculations.

$$\text{a) } 147 \div 10 = \square$$

$$\text{c) } 3,200 \div 10 = \square$$

$$147 \div 100 = \square$$

$$3,200 \div 100 = \square$$

$$147 \div 1,000 = \square$$

$$3,200 \div 1,000 = \square$$

$$\text{b) } 21 \div 10 = \square$$

$$\text{d) } 5,006 \div 10 = \square$$

$$21 \div 100 = \square$$

$$5,006 \div 100 = \square$$

$$21 \div 1,000 = \square$$

$$5,006 \div 1,000 = \square$$

8

Complete the divisions.

$$\text{a) } 83 \div \square = 0.83$$

$$\text{e) } 1,799 \div \square = 17.99$$

$$\text{b) } \square \div 10 = 0.95$$

$$\text{f) } \square \div 100 = 11.8$$

$$\text{c) } \square \div 10 = 3.9$$

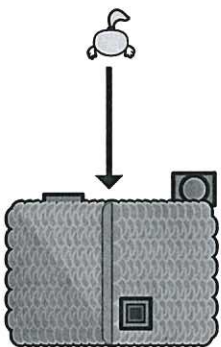
$$\text{g) } 178 \div \square = 17.8$$

$$\text{d) } 68 \div \square = 0.068$$

$$\text{h) } 3.18 \div \square = 0.318$$

Measuring angles in degrees

- 1 Eva is facing her house.



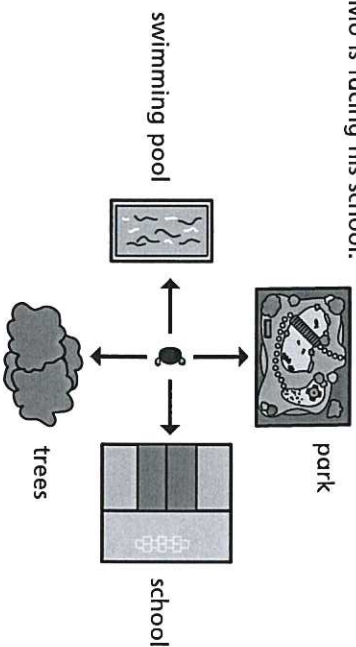
She makes a full turn.

- a) What is Eva facing now?

- b) How many degrees has Eva turned through?

 degrees

- 2 Mo is facing his school.



Mo makes a half turn.

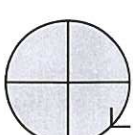
- a) What is Mo facing now?

- b) How many degrees did Mo turn through?

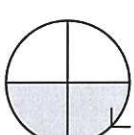
 degrees

- 3 Complete the sentences.

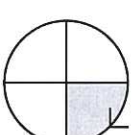
- a) There are degrees in a full turn.



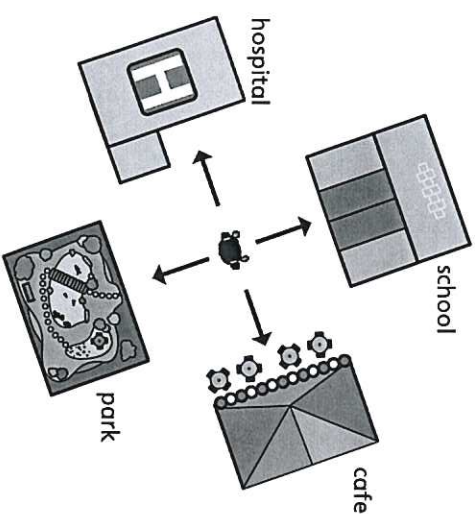
- b) There are degrees in half a full turn.



- c) There are degrees in quarter of a full turn.



- 4 Whitney is facing the school.



Whitney turns half a turn.

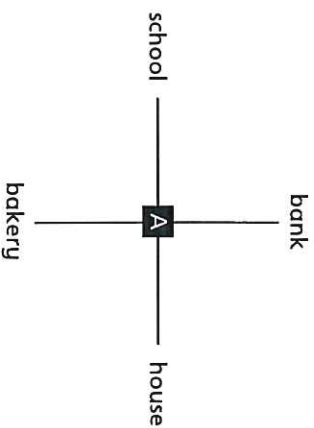
What is she now facing?

Does it matter which way she turns?



5

Amir, Annie, Jack and Filip are standing at point A.



a) Amir is facing the bank. He turns 90 degrees clockwise.

What is Amir facing now?

b) Amir faces the bank again.

This time he turns 90° anticlockwise.

What is he now facing?

c) Jack is facing the house.

He makes a 90° turn.

What could he now be facing?

d) Filip is facing the school.

He turns to face the house.

How many degrees did he turn through?

e) Annie is facing the bakery.

She turns to face the school.

Describe two different turns she could have made.

6

Ron is standing in the park.

He is facing forward and looking at a slide.

He makes a 180 degree turn and is now facing a bench.

He now makes a 90 degree turn and is facing a tree.

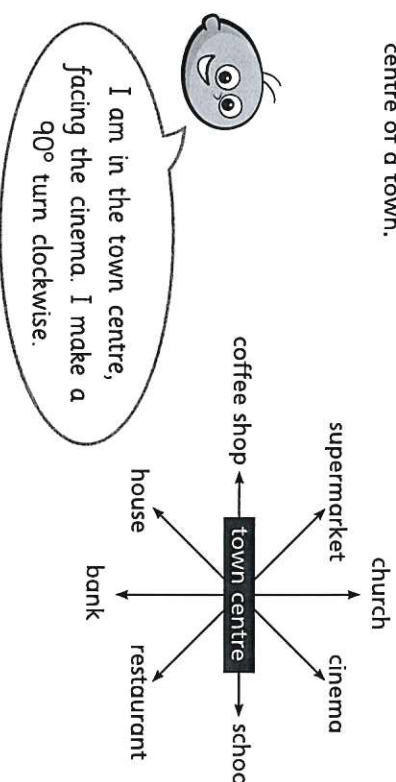
Draw a possible diagram of the park.

Compare your diagram with a partner's diagram.

What is the same and what is different about your diagrams?

7

The diagram shows the direction of some places in relation to the centre of a town.



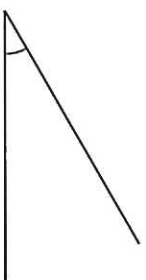
What is Tommy facing now?

Create your own problem like this for a partner.

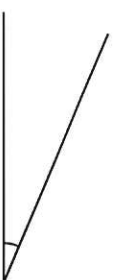
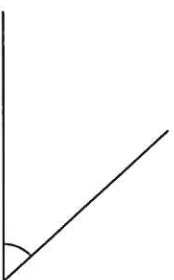
Measuring with a protractor (1)

1 Circle the greater angle in each pair.

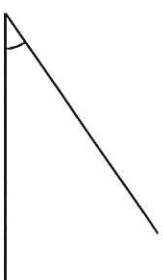
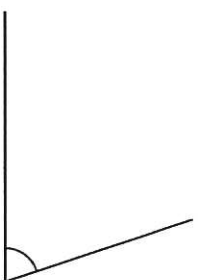
a)



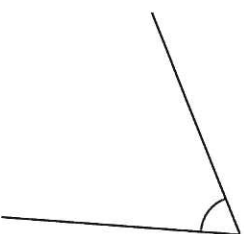
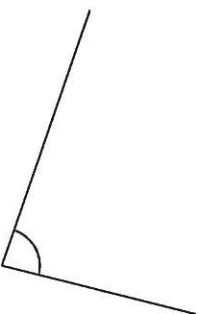
b)



c)



d)

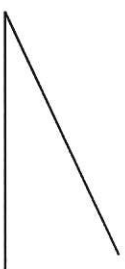


2

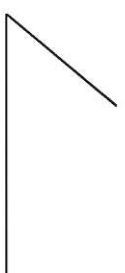


I think angle A is bigger than angle B.

angle A



angle B

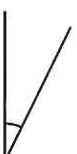


Explain the mistake Tommy has made.

3

List the angles in order of size. Start with the smallest.

A



C



B



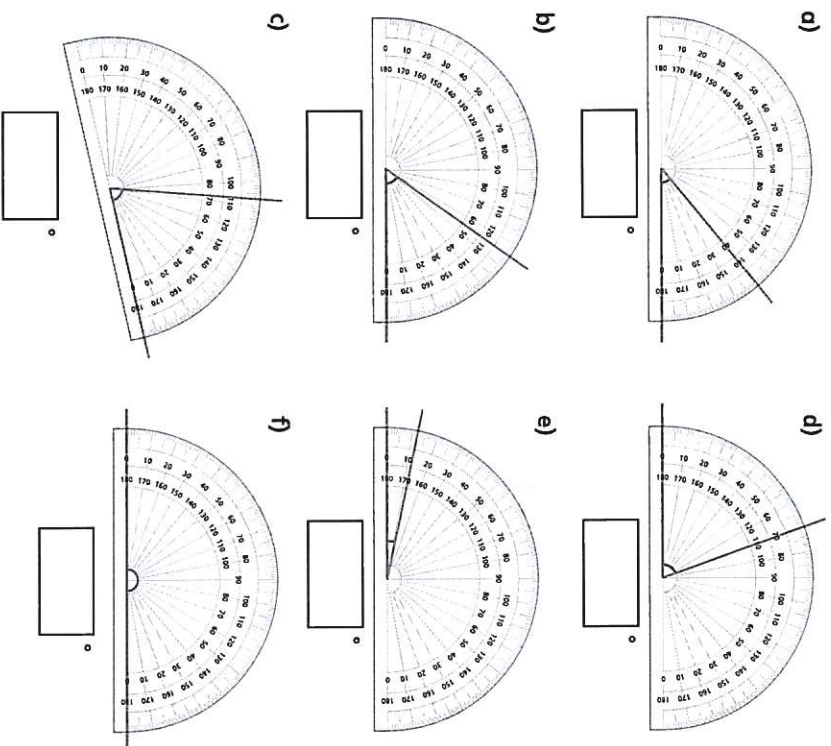
D



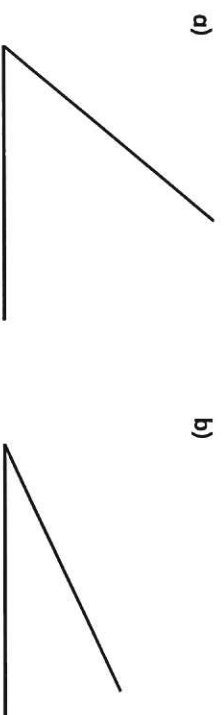
How did you decide the correct order?



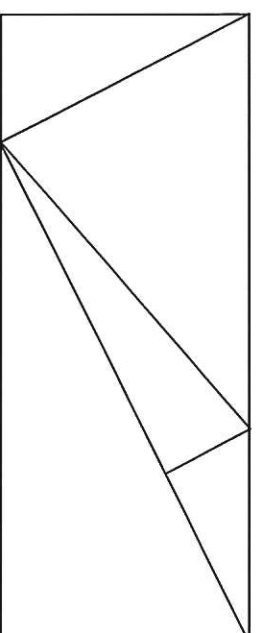
4 What is the size of the angle marked in each diagram?



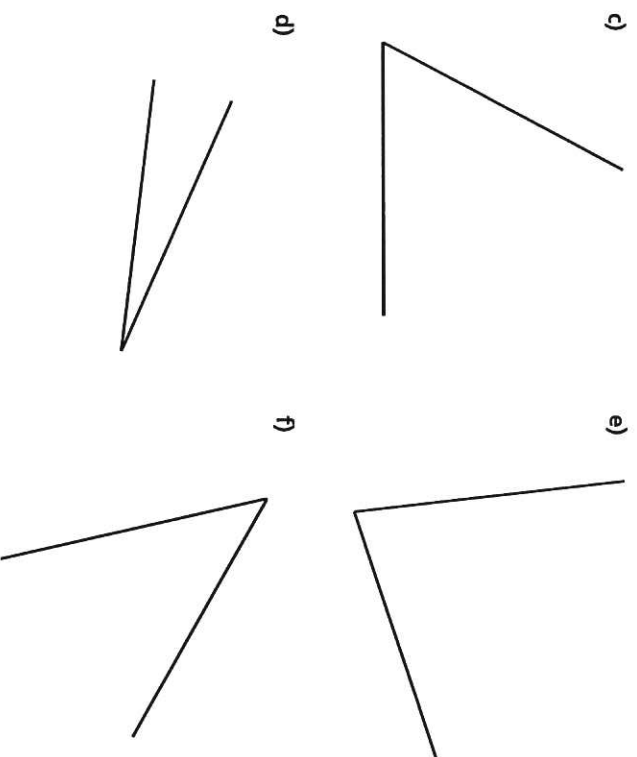
5 Use a protractor to measure the angles and label them on the diagrams.



6 Look at the diagram.



- a) What is the smallest angle you can find in this diagram? Label it on the diagram. What does the angle measure? °
- b) Find an angle between 70° and 90°. Mark it on the diagram. What does the angle measure? °
- c) Measure and label three more angles on the diagram.

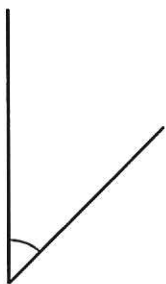


Measuring with a protractor (2)

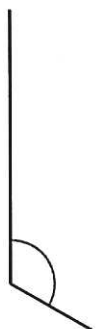
1

Circle the greater angle in each pair.

a)



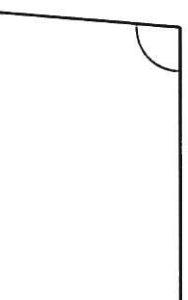
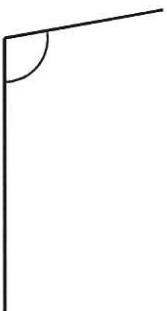
b)



c)



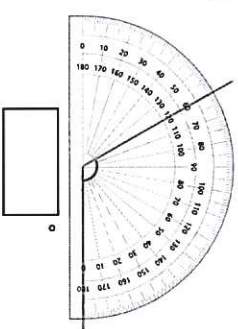
d)



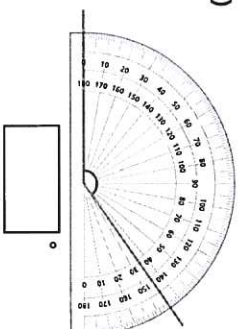
2

What is the size of the angle marked in each diagram?

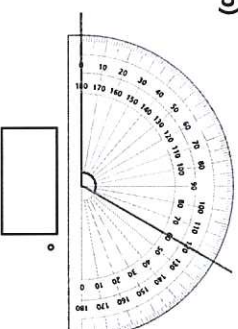
a)



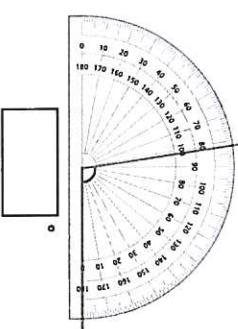
d)



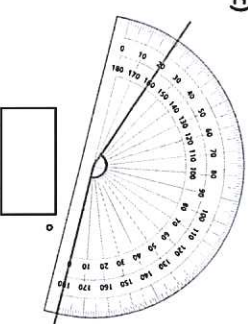
b)



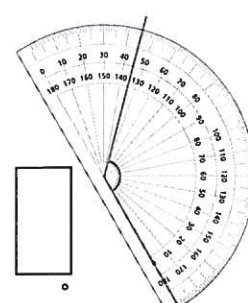
e)



c)



f)



3



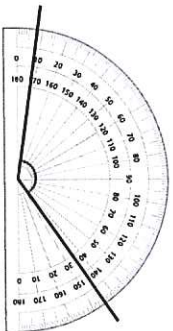
The angle marked is
30 degrees.



a) How do you know, just by looking at the angle, that it is not 30 degrees?

b) What mistake do you think Annie has made?

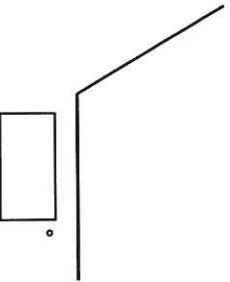
- 4 Scott is trying to measure the obtuse angle.



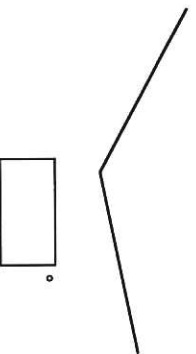
What mistake has Scott made?

- 5 Measure each of the angles.

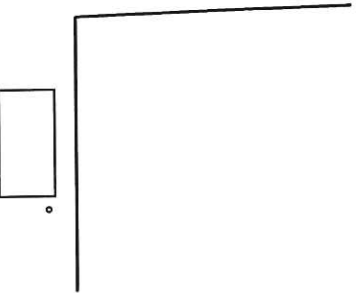
a)



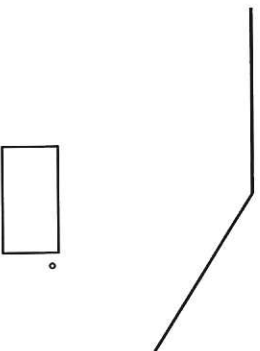
c)



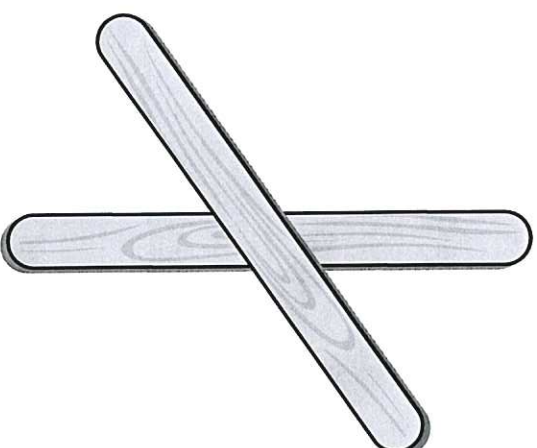
b)



d)



- 6 Eva puts one ice-lolly stick over another ice-lolly stick.



- a) Estimate the size of the largest angle between the two ice-lolly sticks.

My estimate is °.

- b) Measure the angle to check your estimate.

The actual measurement is °.

- c) Measure the size of each of the angles formed by the ice-lolly sticks and label them on the diagram.

- d) Use ice-lolly sticks to create different sized angles and measure them.



Drawing lines and angles accurately

1

Draw each of the angles accurately.

Use the line provided as part of your angle.

a) 60 degrees

b) 85°

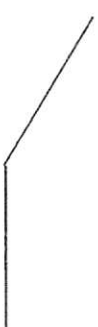
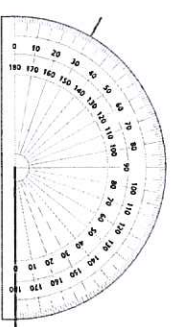
c) 110°

d) 143°



2

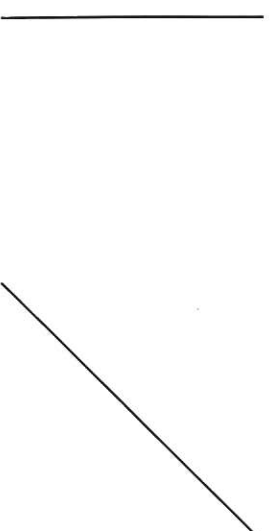
Dexter is asked to draw an angle of 30 degrees. He marks a point as shown.



What mistake has Dexter made?

3

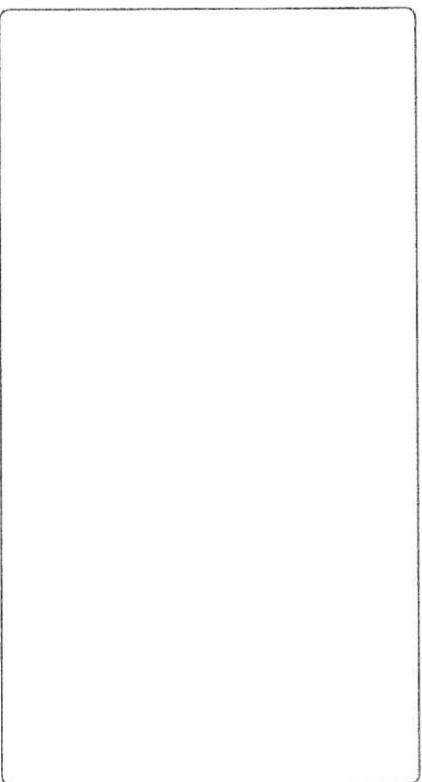
Draw an angle of 100° on each line.
Use the lines to form part of the angle.



4

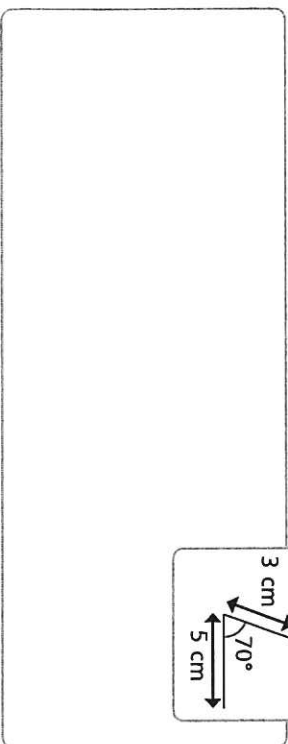
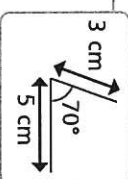
Draw three angles that all measure 55° .

Each angle should be in a different orientation.

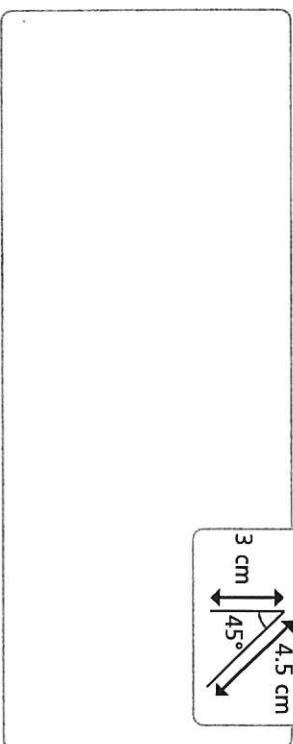
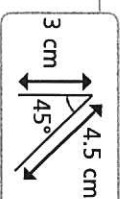


5

Draw these lines and angles accurately using a ruler and protractor.



a)

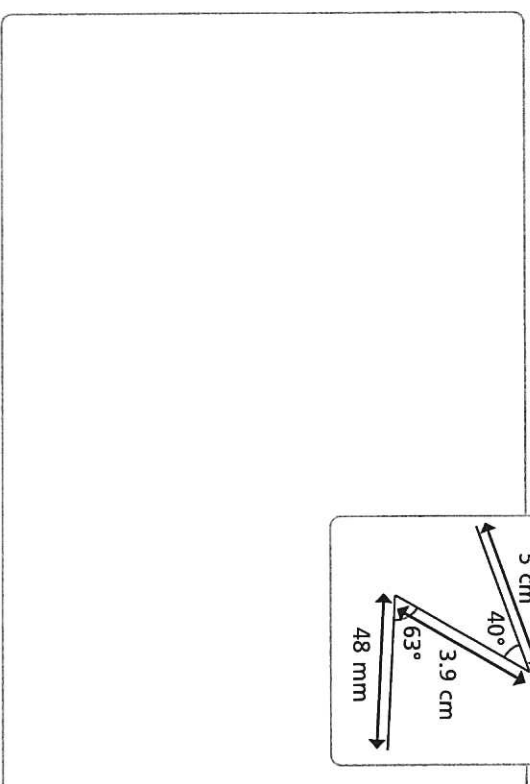
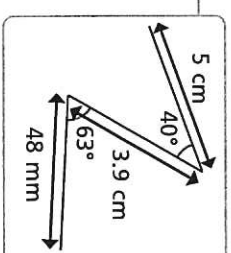


b)



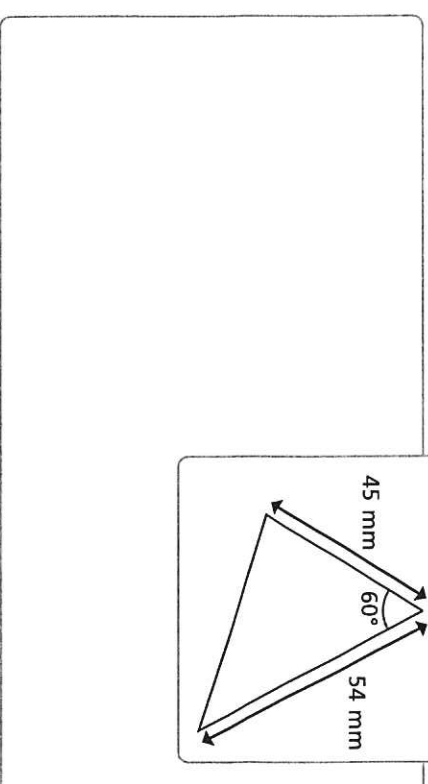
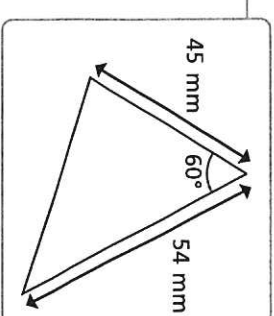
6

Make an accurate drawing of the shape.



7

Draw the triangle accurately and work out its perimeter.

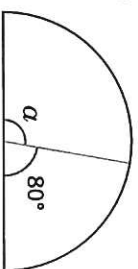


perimeter = mm

Calculating angles on a straight line

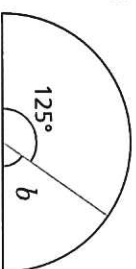
1 Work out the sizes of the unknown angles.

a)



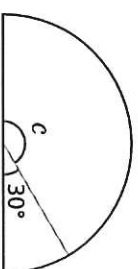
$$a = \boxed{}^\circ$$

b)



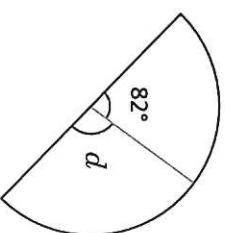
$$b = \boxed{}^\circ$$

c)



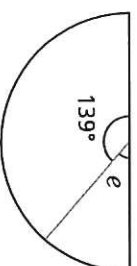
$$c = \boxed{}^\circ$$

d)



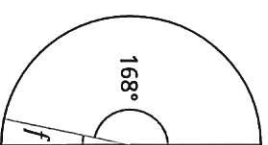
$$d = \boxed{}^\circ$$

e)



$$e = \boxed{}^\circ$$

f)



$$f = \boxed{}^\circ$$

2 Work out the size of the unknown angles.

a)



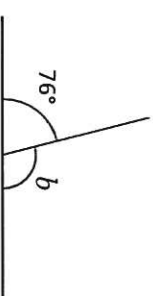
$$a = \boxed{}^\circ$$

d)



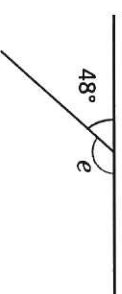
$$d = \boxed{}^\circ$$

b)



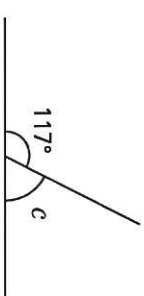
$$b = \boxed{}^\circ$$

e)



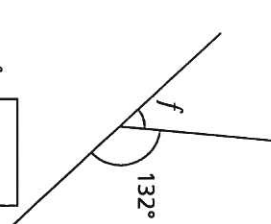
$$e = \boxed{}^\circ$$

c)



$$c = \boxed{}^\circ$$

f)

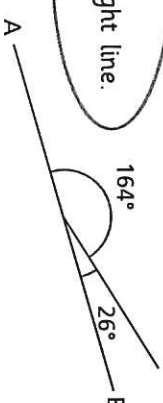


$$f = \boxed{}^\circ$$

3 Dora draws two angles.



AB is a straight line.



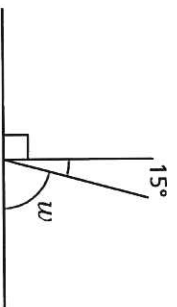
Do you agree with Dora? _____
Explain your answer.



- 4 Work out the size of the unknown angles.

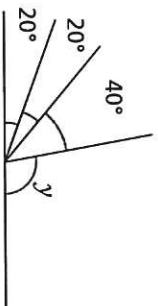
Show the steps in your working.

a)



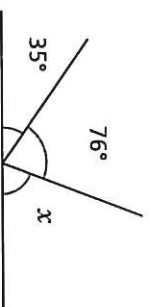
$$w = \boxed{}^\circ$$

c)



$$\gamma = \boxed{}^\circ$$

b)



$$x = \boxed{}^\circ$$

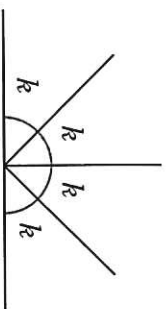
d)



$$z = \boxed{}^\circ$$

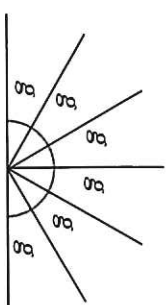
- 5 Work out the sizes of the unknown angles.

a)



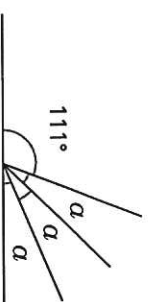
$$k = \boxed{}^\circ$$

b)



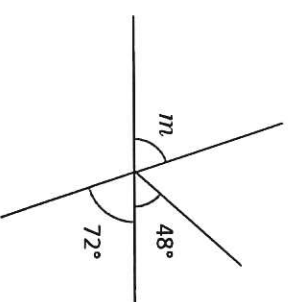
$$g = \boxed{}^\circ$$

- 6 Work out the size of angle α .



$$\alpha = \boxed{}^\circ$$

- 7 Work out the size of angle m .
Show all your working out.



$$m = \boxed{}^\circ$$

- 8 Two angles are marked.

Angle b is eight times the size of angle α .
What is the size of each angle?

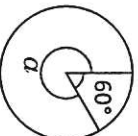


$$\alpha = \boxed{}^\circ \quad b = \boxed{}^\circ$$

Calculating angles around a point

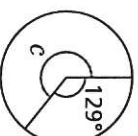
1 Work out the sizes of the unknown angles.

a)



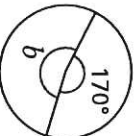
$$a = \boxed{}^\circ$$

c)



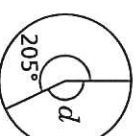
$$c = \boxed{}^\circ$$

b)



$$b = \boxed{}^\circ$$

d)



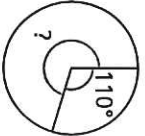
$$d = \boxed{}^\circ$$

2 Ron turns clockwise through 110 degrees.

He continues to turn the same way.

He wants to turn to where he was facing at the start.

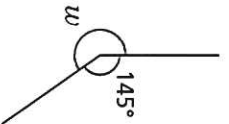
How many more degrees does he need to turn through?



$$\boxed{}^\circ$$

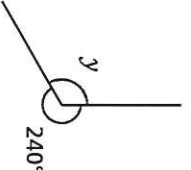
3 Work out the size of the unknown angles.

a)



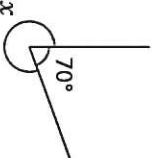
$$w = \boxed{}^\circ$$

c)



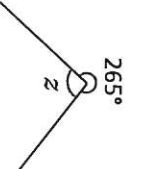
$$y = \boxed{}^\circ$$

b)



$$x = \boxed{}^\circ$$

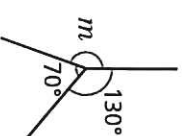
d)



$$z = \boxed{}^\circ$$

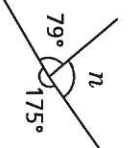
4 Work out the sizes of the unknown angles.

a)



$$m = \boxed{}^\circ$$

b)



$$n = \boxed{}^\circ$$

- 5 Ms Hall asks her class to draw an angle of 250 degrees.



Amir

My protractor only goes up to 180 degrees.

That's true. But I think we can still use it.

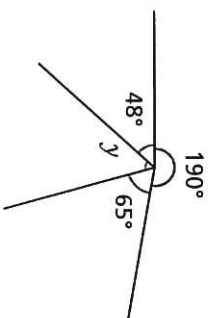


Alex

- a) Explain why Alex is correct.
b) Draw an angle of 250 degrees.

Compare methods with a partner.

- 6 Work out the size of angle y .

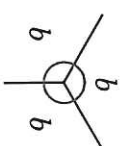


$y = \boxed{}^\circ$

- 7 Work out the sizes of the unknown angles.

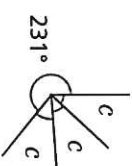
Give reasons to support your answers.

a)



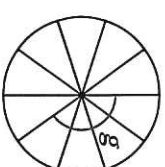
$b = \boxed{}^\circ$ because _____

b)



$c = \boxed{}^\circ$ because _____

- 8 A circle is divided into ten equal sections.



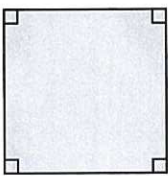
What is the size of the angle marked g ?

$g = \boxed{}^\circ$

Calculating lengths and angles in shapes

1

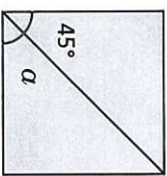
Here is a square.



a) What is the size of each of the angles?

°

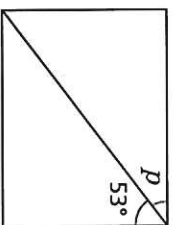
A diagonal line is drawn across the square.



b) Explain why angle α is also 45° .

2

Here is a rectangle.

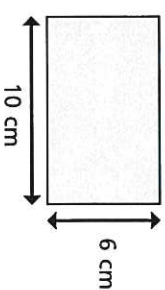


What is the size of the angle marked p ?

$p =$ °

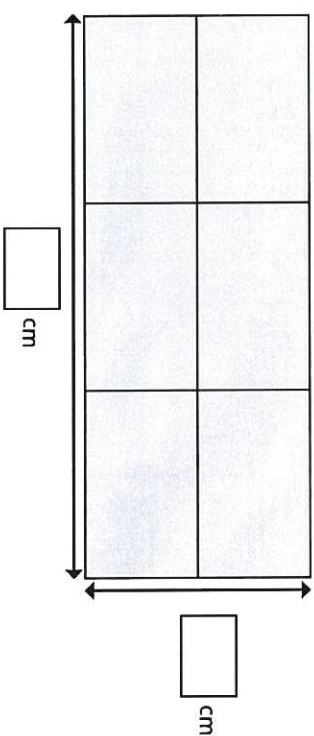
3

Tom has some identical paper rectangles.

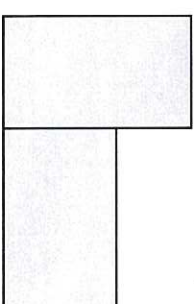


He makes shapes with the rectangles.

a) Work out the missing length and width of this shape.

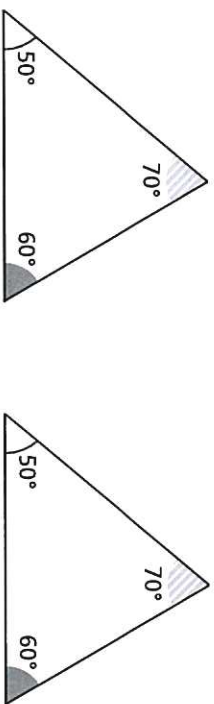


b) Work out the perimeter of this shape.

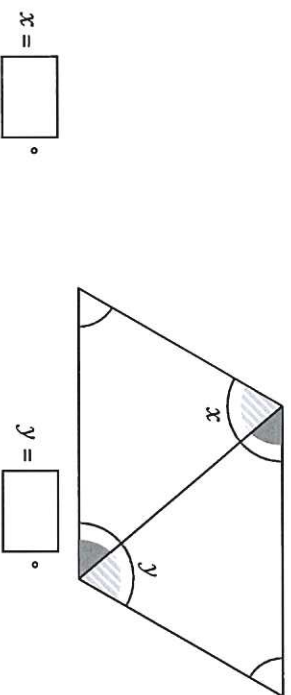


perimeter = cm

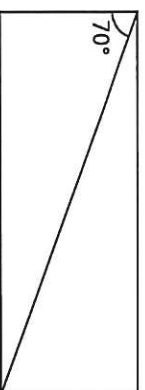
- 4 Dani has two identical triangles.



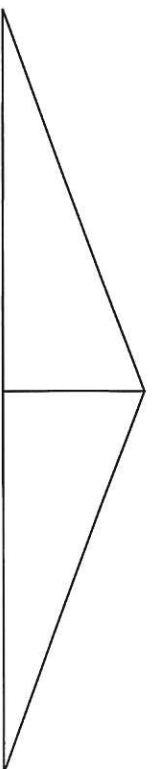
The two triangles are put together to make a quadrilateral.
What are the sizes of angles x and y ?



- 5 The rectangle is cut in half across the diagonal.



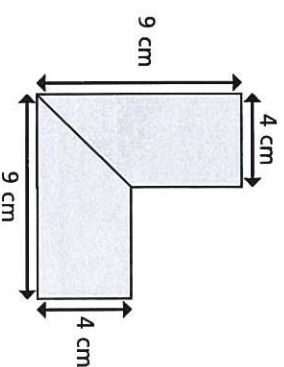
The two triangles are put together to form an isosceles triangle.



Work out the size of the angles in the isosceles triangle and label them on the diagram.

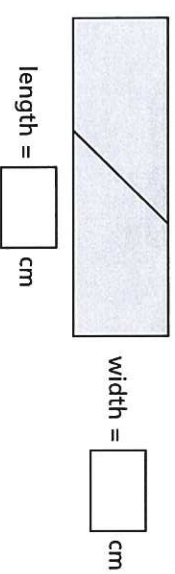
How did you work this out? Talk about it with a partner.

- 6 A hexagon has these dimensions.

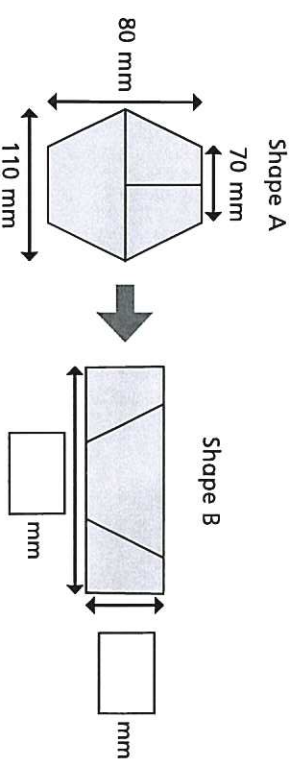


Brett cuts the shape in half and fits the pieces together to make a rectangle.

What is the length and width of the rectangle?



- 7 Shape A is a regular hexagon.
Shape A is cut up to make shape B.



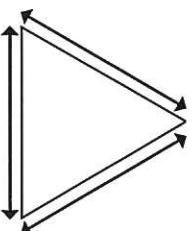
What is the length and width of the new rectangle?
Label the diagram.

Regular and irregular polygons

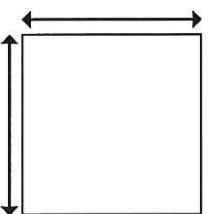
1

Measure and label the sides and angles of each shape.

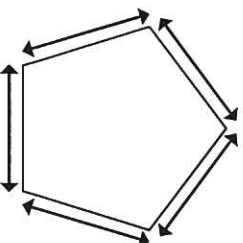
a)



b)



c)



What do you notice about your answers?

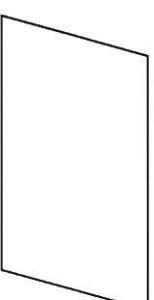
These are all examples of regular polygons.

Explain in your own words what a regular polygon is.

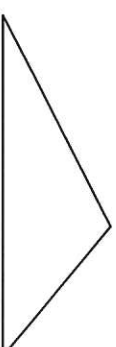
2

Measure and label the sides and angles of each shape.

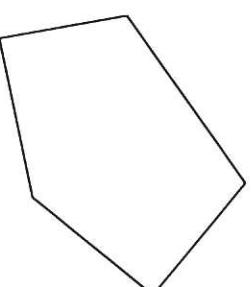
a)



b)



c)



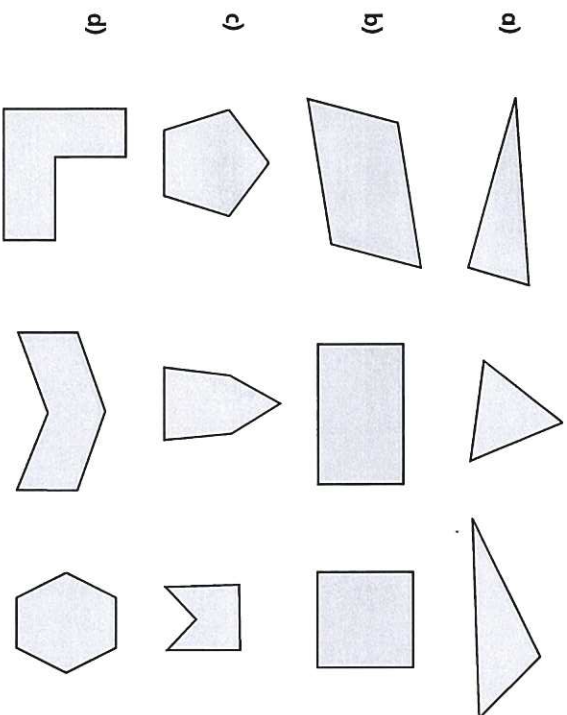
What do you notice about your answers?

These are all examples of irregular polygons.

Explain in your own words what an irregular polygon is.

3

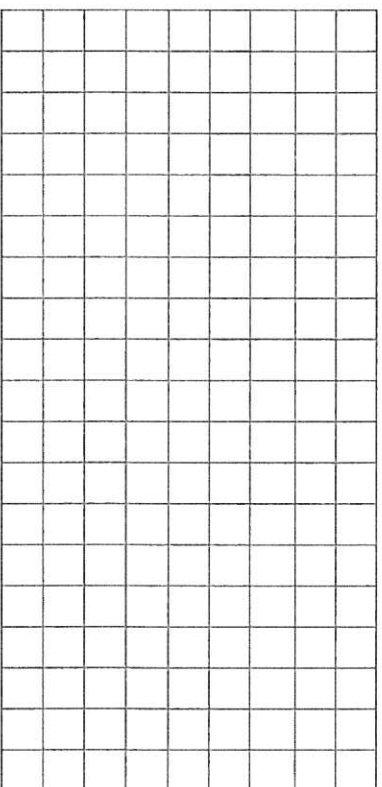
One polygon in each set is regular. Tick the regular polygon.



How did you know which one was regular without measuring?

4

Draw two regular and two irregular polygons on the grid.

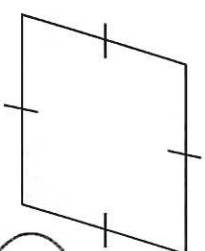


Compare your polygons with a partner.

What is the same and what is different?

5

Here is a rhombus.



This is a regular polygon because all the sides are the same length.

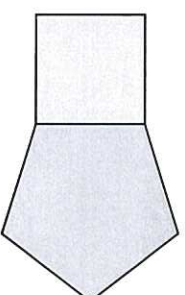


Do you agree with Ron? _____

Explain your answer.

6

Eva has drawn a square and a regular pentagon.



The compound shape is regular because both of the shapes I drew were regular.

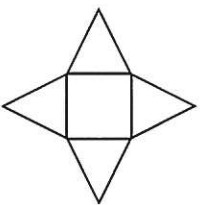


Do you agree with Eva? _____

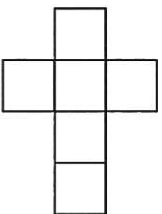
Explain your answer.

Reasoning about 3D shapes

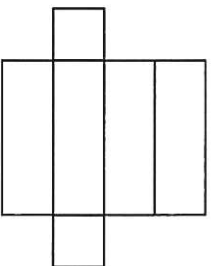
1 Match the net to the correct label.



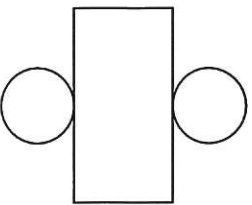
cube



cylinder



square-based
pyramid



cuboid

2 Complete the sentences.

a) The faces of a _____ are all square.

b) A square-based pyramid has triangular faces and square face.

c) The net of a _____ is made up of 2 circles and a rectangle.

3



Whitney

The net of a cuboid is made up of 4 rectangles and 2 squares.



Rosie

The net of a cuboid is made up of 6 rectangles.

Who do you agree with? Circle your answer.

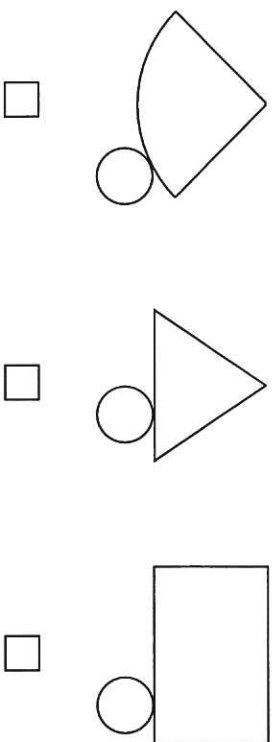
Whitney

Rosie

both of them

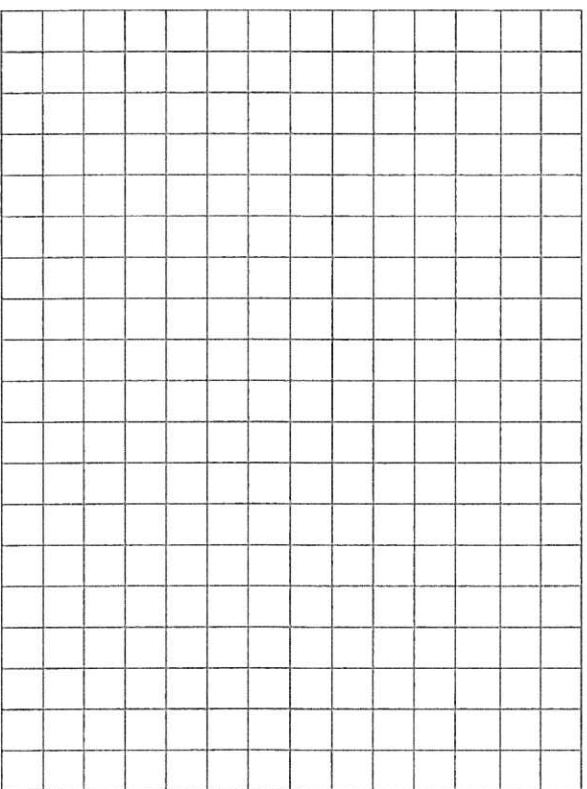
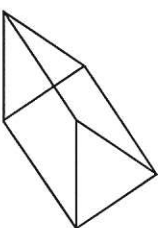
Explain your reasons.

- 4 Tick the diagram that is the net of a cone.

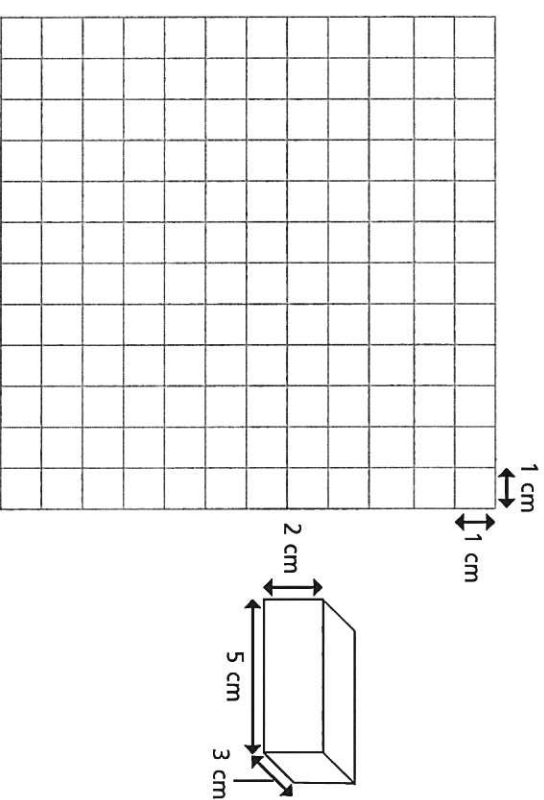


Compare answers with a partner.

- 5 Draw the net for a triangular prism on the squared grid.



- 6 Draw an accurate net for this cuboid on the squared grid.



- 7 Draw two different cuboids on the isometric paper.

