NC7–11

3 Finish these patterns

a $3 = 3^1 =$ ___ (×__, ÷__)

$3 \times 3 = 3^{\_\_} =$ ___ (×__, ÷__)

$3 \times 3 \times 3 = 3^{\_\_} =$ ___ (×__, ÷__)

$3 \times 3 \times 3 \times 3 = 3^{\_\_} =$ ___ (×__, ÷__)

$3 \times 3 \times 3 \times 3 \times 3 = 3^{\_\_} =$ ___

b $4 = 4^{\_\_} =$ ___ (×__, ÷__)

$4 \times 4 = 4^{\_\_} =$ ___ (×__, ÷__)

$4 \times 4 \times 4 = 4^{\_\_} =$ ___ (×__, ÷__)

$4 \times 4 \times 4 \times 4 = 4^{\_\_} =$ ___ (×__, ÷__)

$4 \times 4 \times 4 \times 4 \times 4 = 4^{\_\_} =$ ___

NC7–11

3 Finish these patterns

a $3 = 3^1 =$ ___ (×__, ÷__)

$3 \times 3 = 3^{\_\_} =$ ___ (×__, ÷__)

$3 \times 3 \times 3 = 3^{\_\_} =$ ___ (×__, ÷__)

$3 \times 3 \times 3 \times 3 = 3^{\_\_} =$ ___ (×__, ÷__)

$3 \times 3 \times 3 \times 3 \times 3 = 3^{\_\_} =$ ___

b $4 = 4^{\_\_} =$ ___ (×__, ÷__)

$4 \times 4 = 4^{\_\_} =$ ___ (×__, ÷__)

$4 \times 4 \times 4 = 4^{\_\_} =$ ___ (×__, ÷__)

$4 \times 4 \times 4 \times 4 = 4^{\_\_} =$ ___ (×__, ÷__)

$4 \times 4 \times 4 \times 4 \times 4 = 4^{\_\_} =$ ___

NC7–11

3 Finish these patterns

a $3 = 3^1 =$ ___ (×__, ÷__)

$3 \times 3 = 3^{\_\_} =$ ___ (×__, ÷__)

$3 \times 3 \times 3 = 3^{\_\_} =$ ___ (×__, ÷__)

$3 \times 3 \times 3 \times 3 = 3^{\_\_} =$ ___ (×__, ÷__)

$3 \times 3 \times 3 \times 3 \times 3 = 3^{\_\_} =$ ___

b $4 = 4^{\_\_} =$ ___ (×__, ÷__)

$4 \times 4 = 4^{\_\_} =$ ___ (×__, ÷__)

$4 \times 4 \times 4 = 4^{\_\_} =$ ___ (×__, ÷__)

$4 \times 4 \times 4 \times 4 = 4^{\_\_} =$ ___ (×__, ÷__)

$4 \times 4 \times 4 \times 4 \times 4 = 4^{\_\_} =$ ___

NC7–23

3

222	259	528	341	205	234	414	473	543	833	157	526	192	341	803
603	890	117	454	653	510	746	101	531	514	926	391	120	233	674
625	359	411	538	351	177	612	377	685	369	513	407	504	415	642

Shade the squares with the numbers that are divisible by

a 5 **b** 9 **c** 3 **d** 10

What word does the shading spell?

NC7–23

3

222	259	528	341	205	234	414	473	543	833	157	526	192	341	803
603	890	117	454	653	510	746	101	531	514	926	391	120	233	674
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NC7–23

3

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Shade the squares with the numbers that are divisible by

a 5 **b** 9 **c** 3 **d** 10

What word does the shading spell?

NC7–34

4

12	1	12	5	35		6	4	10	5	7		36	1	81

42	I	35	81	32		14	81	5	28		I	10		16	3	I	10	1
	21										21					21		

Write the letter that is beside each question above its answer.

I $3(5 + 2) = 21$ **W** $4(5 + 4) =$ _____ **F** $6(9 - 2) =$ _____ **U** $7(8 - 6) =$ _____

D $(8 + 6) \times 2 =$ _____ **T** $(6 - 2) \times 8 =$ _____ **S** $9(12 - 4 + 1) =$ _____

R $5(1 + 2 \times 3) =$ _____ **C** $4(12 - 2 \times 4) =$ _____ **H** $19 - 2(4 \times 2) =$ _____

M $\frac{3 \times 4}{2} =$ _____ **Y** $\frac{20 + 8}{4} =$ _____ **O** $\frac{32 - 4}{7} =$ _____ **N** $\frac{80}{2 \times 4} =$ _____

E $\frac{26 + 4}{2 \times 3} =$ _____ **A** $(20 - 16) \div (9 - 5) =$ _____ **P** $36 - 2(3 \times 4) =$ _____

NC7–34

4

12	1	12	5	35		6	4	10	5	7		36	1	81

42	I	35	81	32		14	81	5	28		I	10		16	3	I	10	1
	21										21					21		

Write the letter that is beside each question above its answer.

I $3(5 + 2) = 21$ **W** $4(5 + 4) =$ _____ **F** $6(9 - 2) =$ _____ **U** $7(8 - 6) =$ _____

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M $\frac{3 \times 4}{2} =$ _____ **Y** $\frac{20 + 8}{4} =$ _____ **O** $\frac{32 - 4}{7} =$ _____ **N** $\frac{80}{2 \times 4} =$ _____

E $\frac{26 + 4}{2 \times 3} =$ _____ **A** $(20 - 16) \div (9 - 5) =$ _____ **P** $36 - 2(3 \times 4) =$ _____

NC7–39

4

1·2	0·12	**A** 620	14	12	1·2	**A** 620	14	6200	6·2	0·12	6200	0·062	62	140	1·4
0·0012	0·62	1·2	0·12	6·2	0·12	**A** 620	6·2	0·14	**A** 620	62	120	140	0·62	62	12

Write the letter above the answer. The first one is done.

A 62 × 10 = 620 **E** 62 × 100 = _____ **O** 0·62 ÷ 10 = _____ **T** 6200 ÷ 1000 = _____

N 0·062 × 1000 = _____ **I** 62 ÷ 100 = _____ **L** 1·4 × 100 = _____

Y 14 ÷ 10 = _____ **C** 140 ÷ 1000 = _____ **R** 0·014 × 1000 = _____

F 1·2 ÷ 1000 = _____ **H** 12 ÷ 100 = _____ **S** 0·012 × 100 = _____

K 0·012 × 1000 = _____ **B** 1·2 × 100 = _____

NC7–39

4

1·2	0·12	**A** 620	14	12	1·2	**A** 620	14	6200	6·2	0·12	6200	0·062	62	140	1·4
0·0012	0·62	1·2	0·12	6·2	0·12	**A** 620	6·2	0·14	**A** 620	62	120	140	0·62	62	12

Write the letter above the answer. The first one is done.

A 62 × 10 = 620 **E** 62 × 100 = _____ **O** 0·62 ÷ 10 = _____ **T** 6200 ÷ 1000 = _____

N 0·062 × 1000 = _____ **I** 62 ÷ 100 = _____ **L** 1·4 × 100 = _____

Y 14 ÷ 10 = _____ **C** 140 ÷ 1000 = _____ **R** 0·014 × 1000 = _____

F 1·2 ÷ 1000 = _____ **H** 12 ÷ 100 = _____ **S** 0·012 × 100 = _____

K 0·012 × 1000 = _____ **B** 1·2 × 100 = _____

NC7–52

7

7	5	3	22	12	8	5	8	3		18	9	0	13	8	,	12		13	12	2	5	10	0

11	22	0	2	0		5	12		5	13		2	A	5	8	5	8	3					
												2	6										

If $p = 2$, $q = 5$, $r = 7$ find the values of these.
Write the letter that is beside each expression above the answer in the box.

A $3p = 6$

I $r - p =$ _____

E $p + q - r =$ _____

W $2p + r =$ _____

H $3q + r =$ _____

O $2r - q =$ _____

D $2(p + r) =$ _____

S $3q - p =$ _____

N $\frac{16}{p} =$ _____

T $2(p + 4) =$ _____

K $2(r - p) =$ _____

G $\frac{3q}{5} =$ _____

L $\frac{r}{7} + 6 =$ _____

R $\frac{3p}{2} - 1 =$ _____

NC7–52

7

7	5	3	22	12	8	5	8	3		18	9	0	13	8	,	12		13	12	2	5	10	0

11	22	0	2	0		5	12		5	13		2	A	5	8	5	8	3					
												2	6										

If $p = 2$, $q = 5$, $r = 7$ find the values of these.
Write the letter that is beside each expression above the answer in the box.

A $3p = 6$

I $r - p =$ _____

E $p + q - r =$ _____

W $2p + r =$ _____

H $3q + r =$ _____

O $2r - q =$ _____

D $2(p + r) =$ _____

S $3q - p =$ _____

N $\frac{16}{p} =$ _____

T $2(p + 4) =$ _____

K $2(r - p) =$ _____

G $\frac{3q}{5} =$ _____

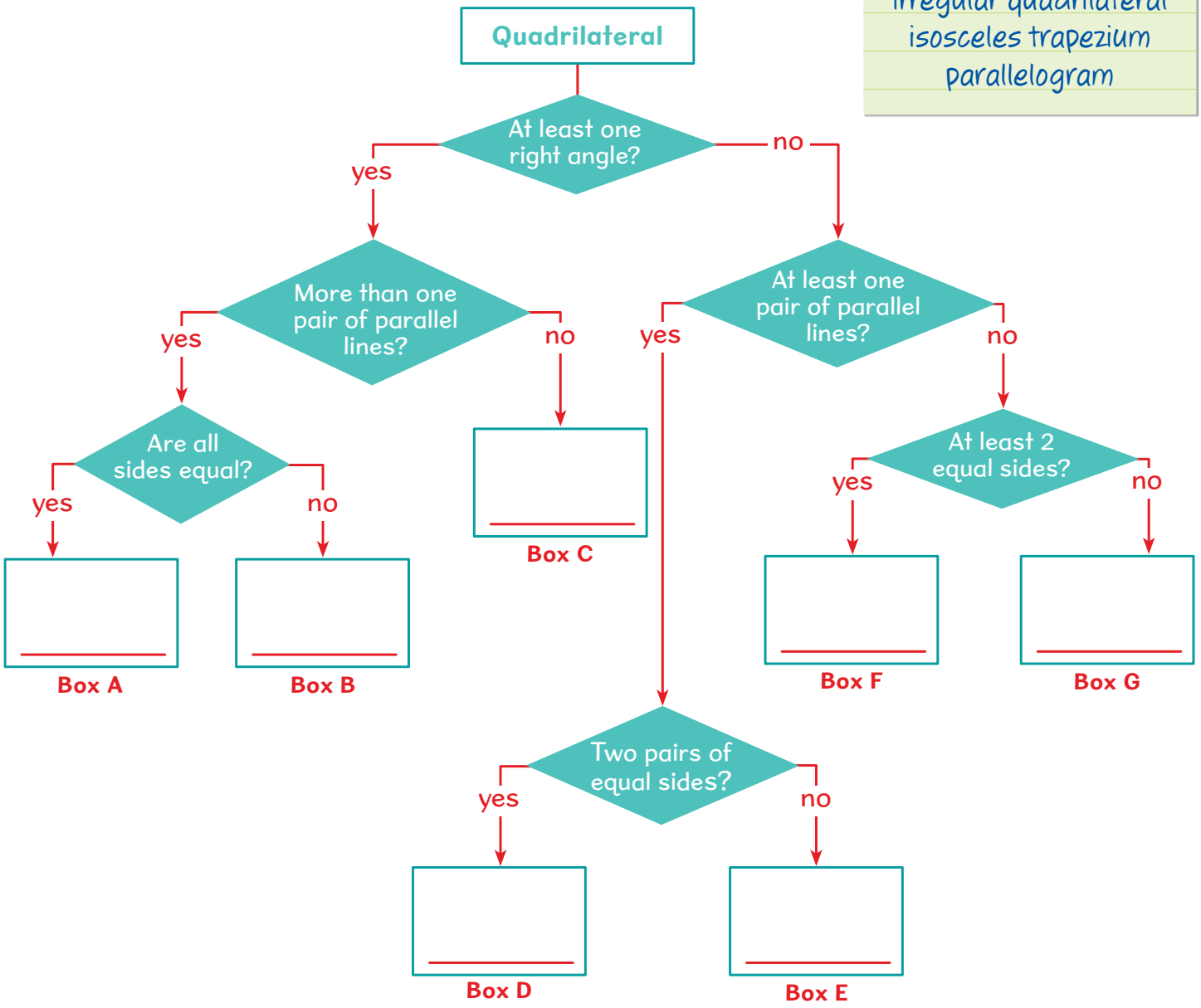
L $\frac{r}{7} + 6 =$ _____

R $\frac{3p}{2} - 1 =$ _____

NC7–57

2 **a** Use this flow chart to find the names of the quadrilaterals that go into the boxes at the bottom of the chart.
Choose the quadrilaterals from the box at the side.
Each quadrilateral can only be used once.

square
rectangle
rhombus
kite
right-angled trapezium
irregular quadrilateral
isosceles trapezium
parallelogram

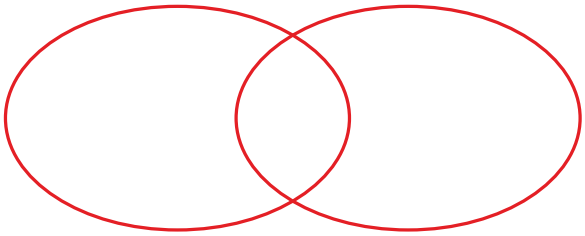


NC7–64

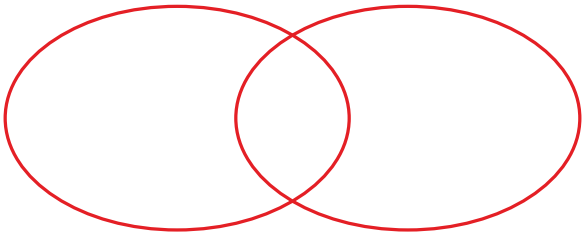
Activity 1

1 Sort the 2-D shapes into these Venn diagrams.
Use the letters for each shape.

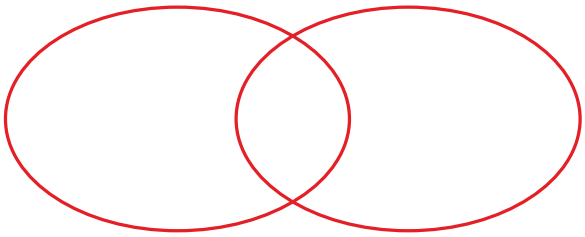
a triangles regular shapes



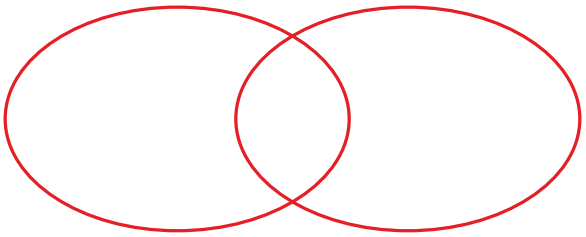
b symmetrical regular



c equal diagonals at least one pair of parallel lines



d regular at least one right angle



NC7–64

Activity 1

1 Sort the 2-D shapes into these Venn diagrams.
Use the letters for each shape.

a triangles regular shapes

b symmetrical regular

c equal diagonals at least one pair of parallel lines

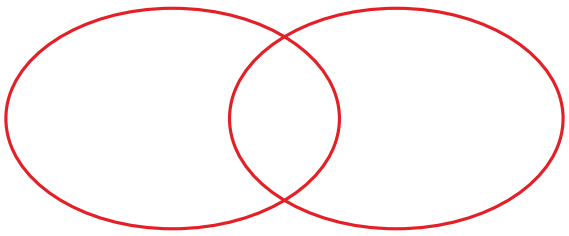
d regular at least one right angle

NC7–65

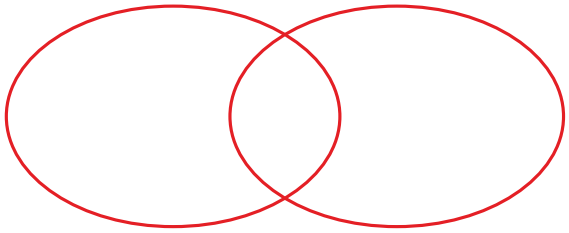
Activity 2

1 Sort the 3-D shapes into these Venn diagrams.
Use the letters for each shape.

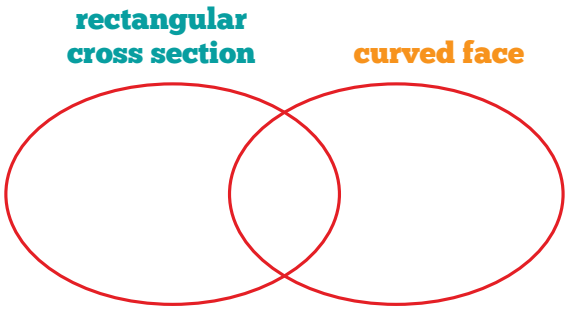
a



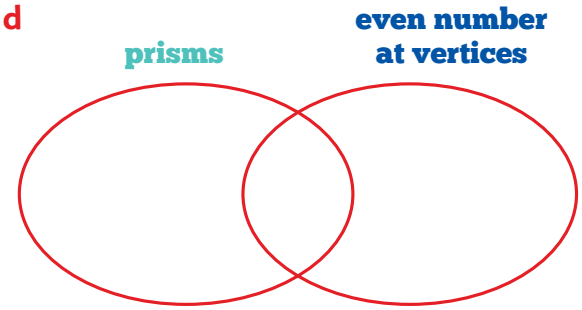
b



c



d

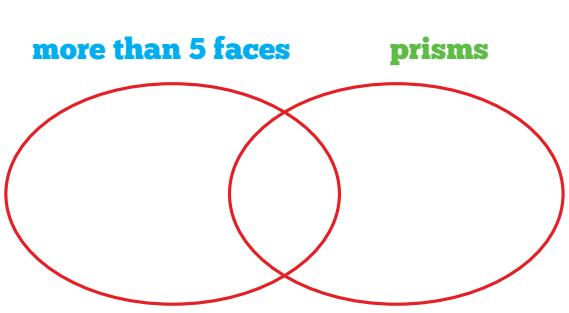


NC7–65

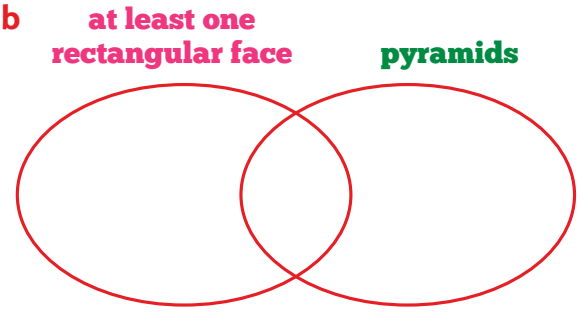
Activity 2

1 Sort the 3-D shapes into these Venn diagrams.
Use the letters for each shape.

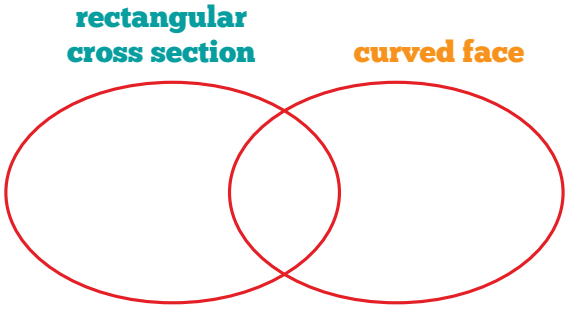
a



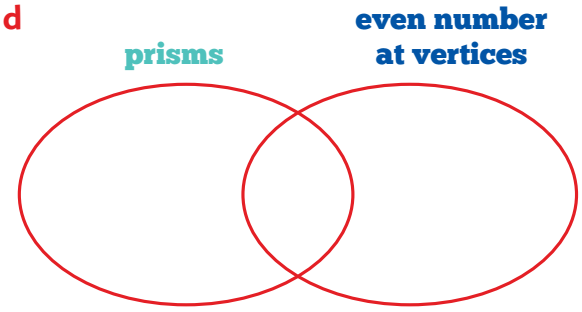
b



c



d



NC7–68

3

N

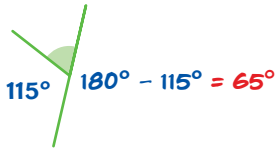
65 70 64 35 151 113 47 138 151

35 112 47 138 57 151 122 67 112 113 47 35 70

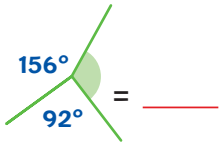
57 67 67 130

Calculate the shaded angles below.
Put the letter that is beside each diagram above its answer.

N

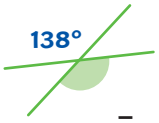


U



= _____

S

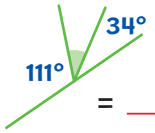


= _____

A

= _____

T

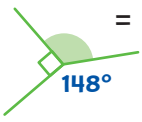


= _____

C

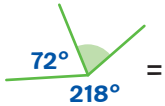
= _____

V



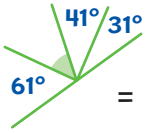
= _____

E



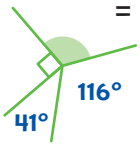
= _____

I



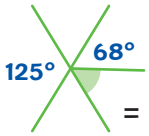
= _____

R



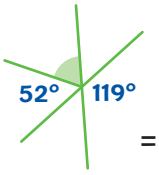
= _____

F



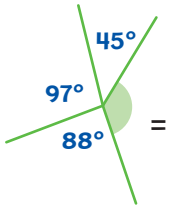
= _____

O



= _____

D

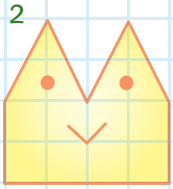


= _____

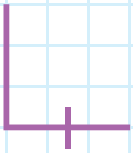
NC7–73

1 Draw the image for each of these.
The scale factor is given in green.

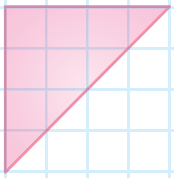
a Scale factor $\frac{1}{2}$



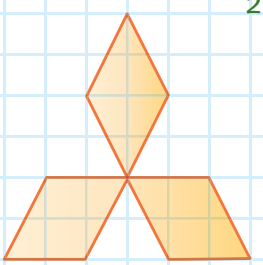
b Scale factor $\frac{1}{3}$



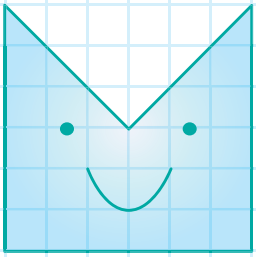
c Scale factor $\frac{1}{4}$



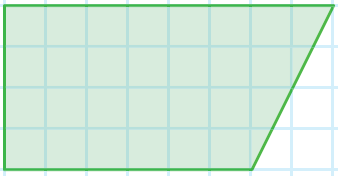
d Scale factor $\frac{1}{2}$



e Scale factor $\frac{1}{3}$

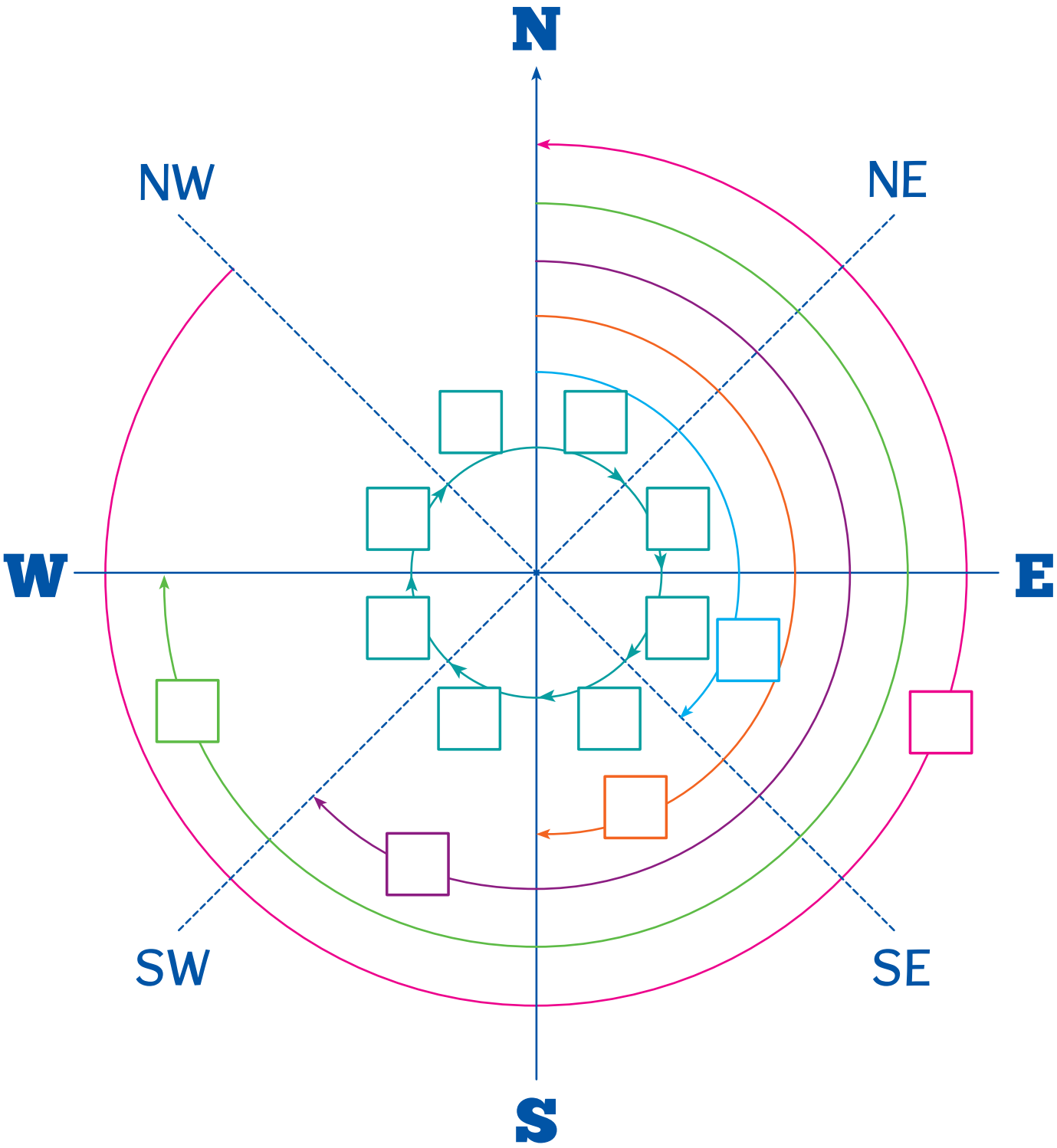


f Scale factor $\frac{1}{2}$



NC7–74

1 Fill in the angles in the boxes.



NC7–75

Practical – What's it all about?

Data names	Properties of data	Data format	
			Where data collected
			From whom data collected
			Who/what data is for