

NC4-2

1 Round these numbers to the nearest 10.

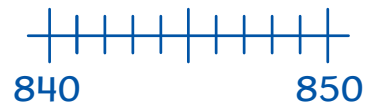
a 346



b 786



c 845



d 1027



e 2355



2 Round these numbers to the nearest 100.

a 458



b 873



c 2562



d 3450



e 4729



3 Round these numbers to the nearest 1000.

a 3468



b 4561



c 8500



d 9756



e 11654



NC4–7

- 1 Captain Mix Up has mixed up all these facts.

Fill in the missing numbers and put all the equations into three families of facts, each with four facts.

a $24 \div \boxed{} = 6$

b $4 \times 25 = \boxed{}$

c $7 \times \boxed{} = 56$

d $6 \times 4 = \boxed{}$

e $56 \div \boxed{} = 8$

f $\boxed{} \div 4 = 25$

g $\boxed{} \div 4 = 6$

h $\boxed{} \times 4 = 100$

i $100 \div \boxed{} = 4$

j $8 \times 7 = \boxed{}$

k $\boxed{} \div 8 = 7$

l $4 \times \boxed{} = 24$

Family of facts:

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

NC4–7

- 1 Captain Mix Up has mixed up all these facts.

Fill in the missing numbers and put all the equations into three families of facts, each with four facts.

a $24 \div \boxed{} = 6$

b $4 \times 25 = \boxed{}$

c $7 \times \boxed{} = 56$

d $6 \times 4 = \boxed{}$

e $56 \div \boxed{} = 8$

f $\boxed{} \div 4 = 25$

g $\boxed{} \div 4 = 6$

h $\boxed{} \times 4 = 100$

i $100 \div \boxed{} = 4$

j $8 \times 7 = \boxed{}$

k $\boxed{} \div 8 = 7$

l $4 \times \boxed{} = 24$

Family of facts:

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

NC4-9

1 Write down the answers to these as quickly as you can.

Time yourself and try and beat it next time.

You could race a partner instead.

Make a note of the ones you don't know and make some flash cards to help you learn them.



Set 1 2s, 5s and 10s	Set 2 3s and 6s	Set 3 7s and 9s	Set 4 4s and 8s
a $2 \times 5 =$ _____	a $3 \times 5 =$ _____	a $4 \times 7 =$ _____	a $2 \times 8 =$ _____
b $15 \div 5 =$ _____	b $21 \div 3 =$ _____	b $18 \div 9 =$ _____	b $24 \div 8 =$ _____
c $2 \times 8 =$ _____	c $3 \times 8 =$ _____	c $7 \times 3 =$ _____	c $4 \times 8 =$ _____
d $20 \div 2 =$ _____	d $12 \div 6 =$ _____	d $27 \div 9 =$ _____	d $32 \div 8 =$ _____
e $40 \div 4 =$ _____	e $18 \div 6 =$ _____	e $36 \div 9 =$ _____	e $28 \div 4 =$ _____
f $35 \div 5 =$ _____	f $12 \div 3 =$ _____	f $54 \div 9 =$ _____	f $40 \div 8 =$ _____
g $9 \times 2 =$ _____	g $9 \times 3 =$ _____	g $9 \times 5 =$ _____	g $8 \times 7 =$ _____
h $5 \times 8 =$ _____	h $6 \times 8 =$ _____	h $9 \times 8 =$ _____	h $5 \times 8 =$ _____
i $16 \div 2 =$ _____	i $30 \div 6 =$ _____	i $35 \div 7 =$ _____	i $36 \div 4 =$ _____
j $50 \div 5 =$ _____	j $24 \div 6 =$ _____	j $45 \div 9 =$ _____	j $72 \div 8 =$ _____
k $5 \times 9 =$ _____	k $3 \times 9 =$ _____	k $7 \times 6 =$ _____	k $6 \times 8 =$ _____
l $5 \times 7 =$ _____	l $6 \times 9 =$ _____	l $7 \times 9 =$ _____	l $4 \times 6 =$ _____
m $30 \div 5 =$ _____	m $24 \div 3 =$ _____	m $63 \div 9 =$ _____	m $56 \div 8 =$ _____
n $18 \div 2 =$ _____	n $36 \div 6 =$ _____	n $56 \div 7 =$ _____	n $32 \div 4 =$ _____
o $5 \times 6 =$ _____	o $4 \times 6 =$ _____	o $63 \div 7 =$ _____	o $72 \div 8 =$ _____

NC4–10

Puzzles – Fact Files

1

U

<u>6</u>	<u>4</u>	<u>18</u>	<u>16</u>	<u>6</u>	<u>36</u>	<u>7</u>	<u>40</u>	<u>7</u>	<u>5</u>	<u>6</u>	<u>27</u>	<u>27</u>
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U

<u>8</u>	<u>7</u>	<u>28</u>	<u>20</u>	<u>4</u>	<u>24</u>	<u>6</u>	<u>5</u>	<u>3</u>	<u>18</u>	<u>48</u>
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28

<u>20</u>	<u>9</u>	<u>6</u>	<u>16</u>	<u>24</u>
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Work out the answers to these. Put the **red** letter that is beside each one above its answer on your copy. The first one has been done.

U $6 \times 3 = 18$	S $6 \times 4 =$ _____	H $12 \div 3 =$ _____	W $32 \div 4 =$ _____
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N $9 \times 4 =$ _____	E $42 \div 6 =$ _____	Y $10 \times 4 =$ _____	B $30 \div 6 =$ _____
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M $4 \times 4 =$ _____	L $9 \times 3 =$ _____	A $18 \div 3 =$ _____	G $5 \times 4 =$ _____
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O $9 \div 3 =$ _____	T $8 \times 6 =$ _____	I $7 \times 4 =$ _____	R $54 \div 6 =$ _____
-----------------------------	-------------------------------	-------------------------------	------------------------------

2

N

<u>28</u>	<u>56</u>	<u>5</u>	<u>8</u>	<u>2</u>	<u>21</u>	<u>32</u>	<u>21</u>	<u>40</u>	<u>40</u>	<u>45</u>	<u>8</u>	<u>32</u>
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<u>45</u>	<u>28</u>	<u>21</u>	<u>40</u>	<u>8</u>	<u>5</u>	<u>21</u>	<u>40</u>	<u>72</u>	<u>7</u>	<u>21</u>
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<u>9</u>	<u>54</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>72</u>	<u>54</u>	<u>45</u>	<u>28</u>
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Work out the answers to these. Put the **red** letter that is beside each one above its answer on your copy. The first one has been done.

N $18 \div 9 = 2$	E $3 \times 7 =$ _____	A $64 \div 8 =$ _____	R $6 \times 9 =$ _____
--------------------------	-------------------------------	------------------------------	-------------------------------

Y $4 \times 8 =$ _____	T $5 \times 9 =$ _____	M $35 \div 7 =$ _____	I $9 \times 8 =$ _____
-------------------------------	-------------------------------	------------------------------	-------------------------------

U $8 \times 7 =$ _____	Z $63 \div 9 =$ _____	H $4 \times 7 =$ _____	F $81 \div 9 =$ _____
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O $32 \div 8 =$ _____	S $5 \times 8 =$ _____	B $48 \div 8 =$ _____
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NC4–11

Game – Test your neighbour (page 1 of 2)

1

2

3

4

5

6

7

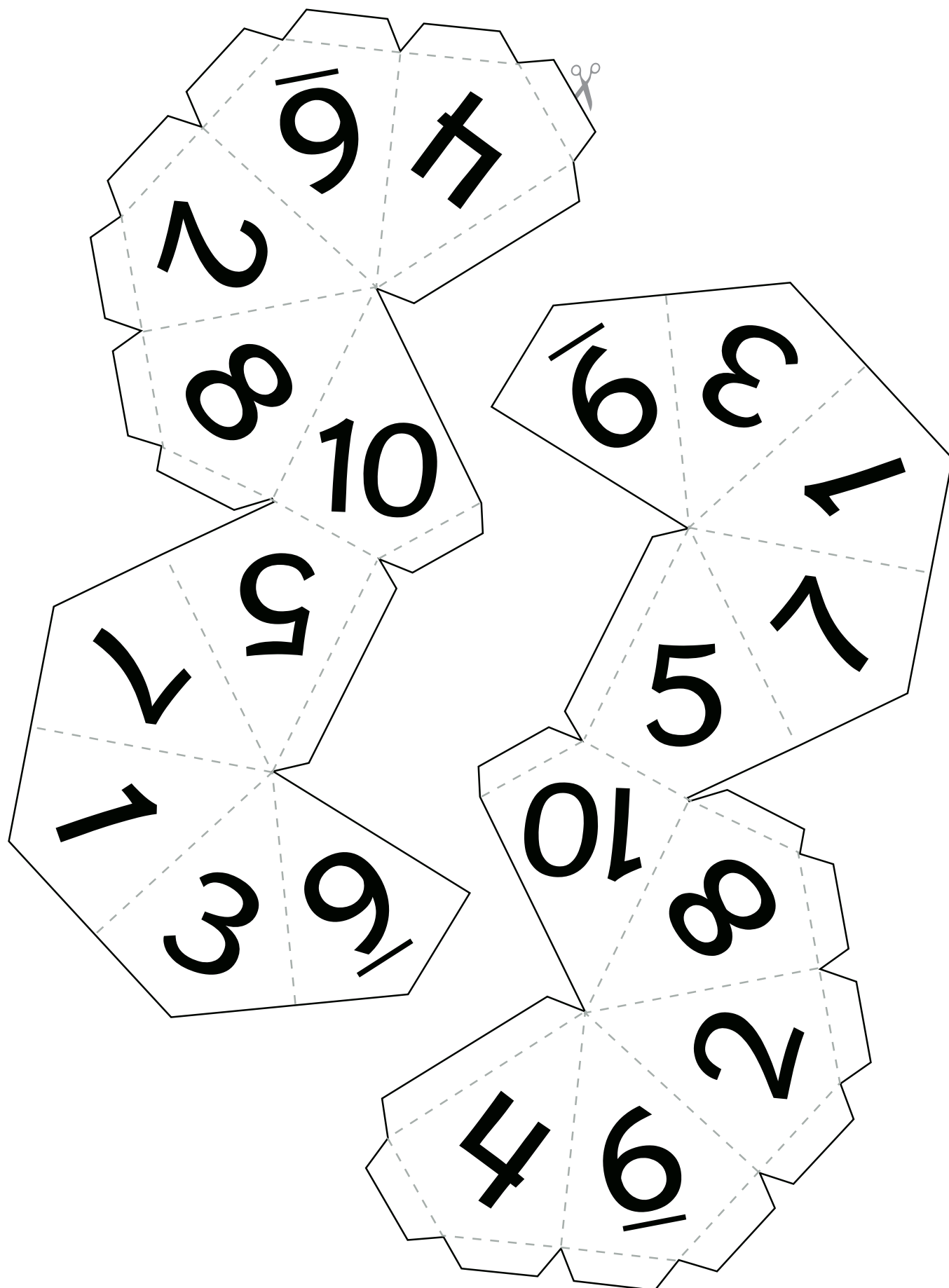
8

9

10

NC4–11

Game – Test your neighbour (page 2 of 2)



NC4–12

Game – Cover up (page 1 of 2)

Numbers rolled	Answer

Numbers rolled	Answer



NC4–12

Game – Cover up (page 2 of 2)



NC4–15

- 1 a Captain Fiddlestix has mixed up all these facts.
Fill in the missing numbers and then put them into **three families**, each with four facts.

i $5 \times 9 = \square$

ii $4 \times \square = 24$

iii $\square \div 8 = 7$

iv $7 \times \square = 56$

v $56 \div \square = 8$

vi $45 \div \square = 9$

vii $9 \times \square = 45$

viii $\square \div 9 = 5$

ix $24 \div \square = 6$

x $\square \times 4 = 24$

xi $\square \div 6 = 4$

xii $8 \times 7 = \square$

Family of facts:

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

- b Fill in the missing numbers and then put them into **three families**, each with four facts.

i $3 \times \square = 21$

ii $6 \times 8 = \square$

iii $5 \times 7 = \square$

iv $\square \div 7 = 5$

v $\square \div 7 = 3$

vi $48 \div 6 = \square$

vii $48 \div \square = 6$

viii $35 \div \square = 7$

ix $7 \times 3 = \square$

x $\square \div 3 = 7$

xi $\square \times 6 = 48$

xii $7 \times \square = 35$

Family of facts:

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

NC4–15

- 2 Fill in the missing number for each of these facts.
For each one write the other three facts that make a **family of facts**.

a $3 \times 4 = \underline{\hspace{2cm}}$ **b** $5 \times \underline{\hspace{2cm}} = 40$ **c** $20 \div 5 = \underline{\hspace{2cm}}$ **d** $15 \div \underline{\hspace{2cm}} = 5$

e $\underline{\hspace{2cm}} \times 8 = 72$ **f** $6 \times \underline{\hspace{2cm}} = 30$ **g** $7 \times 9 = \underline{\hspace{2cm}}$ **h** $24 \div \underline{\hspace{2cm}} = 8$

i $\underline{\hspace{2cm}} \times 9 = 54$ **j** $7 \times \underline{\hspace{2cm}} = 28$ **k** $36 \div 4 = \underline{\hspace{2cm}}$ **l** $27 \div \underline{\hspace{2cm}} = 9$

Family of facts:

NC4–15

- 2 Fill in the missing number for each of these facts.
For each one write the other three facts that make a **family of facts**.

a $3 \times 4 = \underline{\hspace{2cm}}$ **b** $5 \times \underline{\hspace{2cm}} = 40$ **c** $20 \div 5 = \underline{\hspace{2cm}}$ **d** $15 \div \underline{\hspace{2cm}} = 5$

e $\underline{\hspace{2cm}} \times 8 = 72$ **f** $6 \times \underline{\hspace{2cm}} = 30$ **g** $7 \times 9 = \underline{\hspace{2cm}}$ **h** $24 \div \underline{\hspace{2cm}} = 8$

i $\underline{\hspace{2cm}} \times 9 = 54$ **j** $7 \times \underline{\hspace{2cm}} = 28$ **k** $36 \div 4 = \underline{\hspace{2cm}}$ **l** $27 \div \underline{\hspace{2cm}} = 9$

Family of facts:

NC4–16

Game – Make a line

4	10	18	27	25	64
6	12	20	30	45	66
8	15	21	36	54	10
9	16	24	18	12	81

NC4–16

Game – Make a line

4	10	18	27	25	64
6	12	20	30	45	66
8	15	21	36	54	10
9	16	24	18	12	81



NC4–31

- 1 On this place value chart, write the decimal that each of these arrows shows.

	Hundreds	Tens	Ones	tenths
a				•
b				•
c				•
d				•
e				•
f				•
g				•
h				•
i				•
j				•
k				•
l				•
m				•
n				•
o				•
p				•

NC4–31

- 1 On this place value chart, write the decimal that each of these arrows shows.

	Hundreds	Tens	Ones	tenths
a				•
b				•
c				•
d				•
e				•
f				•
g				•
h				•
i				•
j				•
k				•
l				•
m				•
n				•
o				•
p				•

NC4-35

- 8 Colour all the fractions that are equivalent to each of these.

What letter did you make?

a $\frac{1}{2}$ b $\frac{2}{3}$ c $\frac{8}{10}$
d $\frac{3}{4}$ e $\frac{1}{4}$ f $\frac{2}{6}$

$\frac{2}{4}$	$\frac{6}{8}$	$\frac{4}{6}$
$\frac{2}{8}$	$\frac{1}{8}$	$\frac{3}{8}$
$\frac{3}{6}$	$\frac{1}{3}$	$\frac{4}{8}$
$\frac{6}{8}$	$\frac{7}{10}$	$\frac{11}{12}$
$\frac{4}{5}$	$\frac{3}{5}$	$\frac{4}{9}$

NC4-35

- 8 Colour all the fractions that are equivalent to each of these.

What letter did you make?

a $\frac{1}{2}$ b $\frac{2}{3}$ c $\frac{8}{10}$
d $\frac{3}{4}$ e $\frac{1}{4}$ f $\frac{2}{6}$

$\frac{2}{4}$	$\frac{6}{8}$	$\frac{4}{6}$
$\frac{2}{8}$	$\frac{1}{8}$	$\frac{3}{8}$
$\frac{3}{6}$	$\frac{1}{3}$	$\frac{4}{8}$
$\frac{6}{8}$	$\frac{7}{10}$	$\frac{11}{12}$
$\frac{4}{5}$	$\frac{3}{5}$	$\frac{4}{9}$

NC4-35

- 8 Colour all the fractions that are equivalent to each of these.

What letter did you make?

a $\frac{1}{2}$ b $\frac{2}{3}$ c $\frac{8}{10}$
d $\frac{3}{4}$ e $\frac{1}{4}$ f $\frac{2}{6}$

$\frac{2}{4}$	$\frac{6}{8}$	$\frac{4}{6}$
$\frac{2}{8}$	$\frac{1}{8}$	$\frac{3}{8}$
$\frac{3}{6}$	$\frac{1}{3}$	$\frac{4}{8}$
$\frac{6}{8}$	$\frac{7}{10}$	$\frac{11}{12}$
$\frac{4}{5}$	$\frac{3}{5}$	$\frac{4}{9}$

NC4-35

- 8 Colour all the fractions that are equivalent to each of these.

What letter did you make?

a $\frac{1}{2}$ b $\frac{2}{3}$ c $\frac{8}{10}$
d $\frac{3}{4}$ e $\frac{1}{4}$ f $\frac{2}{6}$

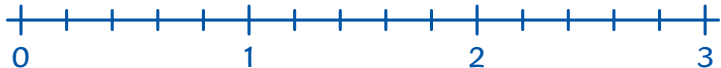
$\frac{2}{4}$	$\frac{6}{8}$	$\frac{4}{6}$
$\frac{2}{8}$	$\frac{1}{8}$	$\frac{3}{8}$
$\frac{3}{6}$	$\frac{1}{3}$	$\frac{4}{8}$
$\frac{6}{8}$	$\frac{7}{10}$	$\frac{11}{12}$
$\frac{4}{5}$	$\frac{3}{5}$	$\frac{4}{9}$

NC4-38

3 Put these mixed numbers and **improper fractions** onto these number lines.

a $\frac{7}{4}, 1\frac{1}{4}, \frac{11}{4}, \frac{10}{4}$  quarters

b $\frac{5}{3}, 1\frac{2}{3}, 2\frac{1}{3}$  thirds

c $\frac{6}{5}, 2\frac{2}{5}, 1\frac{3}{5}, \frac{9}{5}$  fifths

d $2\frac{4}{6}, \frac{17}{6}, \frac{14}{6}, 1\frac{5}{6}$  sixths

e $\frac{13}{10}, 2\frac{4}{10}, 1\frac{7}{10}, \frac{27}{10}$  tenths

NC4-38

3 Put these mixed numbers and **improper fractions** onto these number lines.

a $\frac{7}{4}, 1\frac{1}{4}, \frac{11}{4}, \frac{10}{4}$  quarters

b $\frac{5}{3}, 1\frac{2}{3}, 2\frac{1}{3}$  thirds

c $\frac{6}{5}, 2\frac{2}{5}, 1\frac{3}{5}, \frac{9}{5}$  fifths

d $2\frac{4}{6}, \frac{17}{6}, \frac{14}{6}, 1\frac{5}{6}$  sixths

e $\frac{13}{10}, 2\frac{4}{10}, 1\frac{7}{10}, \frac{27}{10}$  tenths

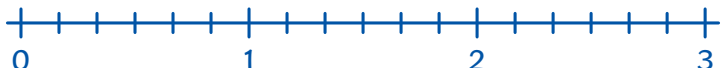
NC4-38

3 Put these mixed numbers and **improper fractions** onto these number lines.

a $\frac{7}{4}, 1\frac{1}{4}, \frac{11}{4}, \frac{10}{4}$  quarters

b $\frac{5}{3}, 1\frac{2}{3}, 2\frac{1}{3}$  thirds

c $\frac{6}{5}, 2\frac{2}{5}, 1\frac{3}{5}, \frac{9}{5}$  fifths

d $2\frac{4}{6}, \frac{17}{6}, \frac{14}{6}, 1\frac{5}{6}$  sixths

e $\frac{13}{10}, 2\frac{4}{10}, 1\frac{7}{10}, \frac{27}{10}$  tenths

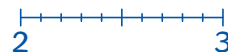
NC4-43

1 Find the answers to these using the decimal number lines below

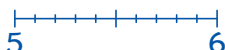
a $1.3 + 0.2 =$ _____



b $2.4 + 0.6 =$ _____



c $5.6 + 0.3 =$ _____



d $3.1 + 0.4 =$ _____



e $6.2 + 1.7 =$ _____



f $7.1 + 3.9 =$ _____



g $12.6 + 2.4 =$ _____



h $6.8 + 2.2 =$ _____



i $5.7 + 3.3 =$ _____



2 Find the answers to these using the number lines shown

a $1.9 - 0.4 =$ _____



b $2.7 - 0.3 =$ _____



c $4.9 - 0.7 =$ _____



d $10.6 - 0.5 =$ _____



e $8.6 - 3.2 =$ _____



f $6.1 - 3.6 =$ _____



g $12.3 - 2.7 =$ _____



h $11.7 - 5.8 =$ _____



i $9.0 - 4.8 =$ _____



NC4-46

- 1 Tick the boxes to show one way how you could make up the amount in green.
The first one is done.

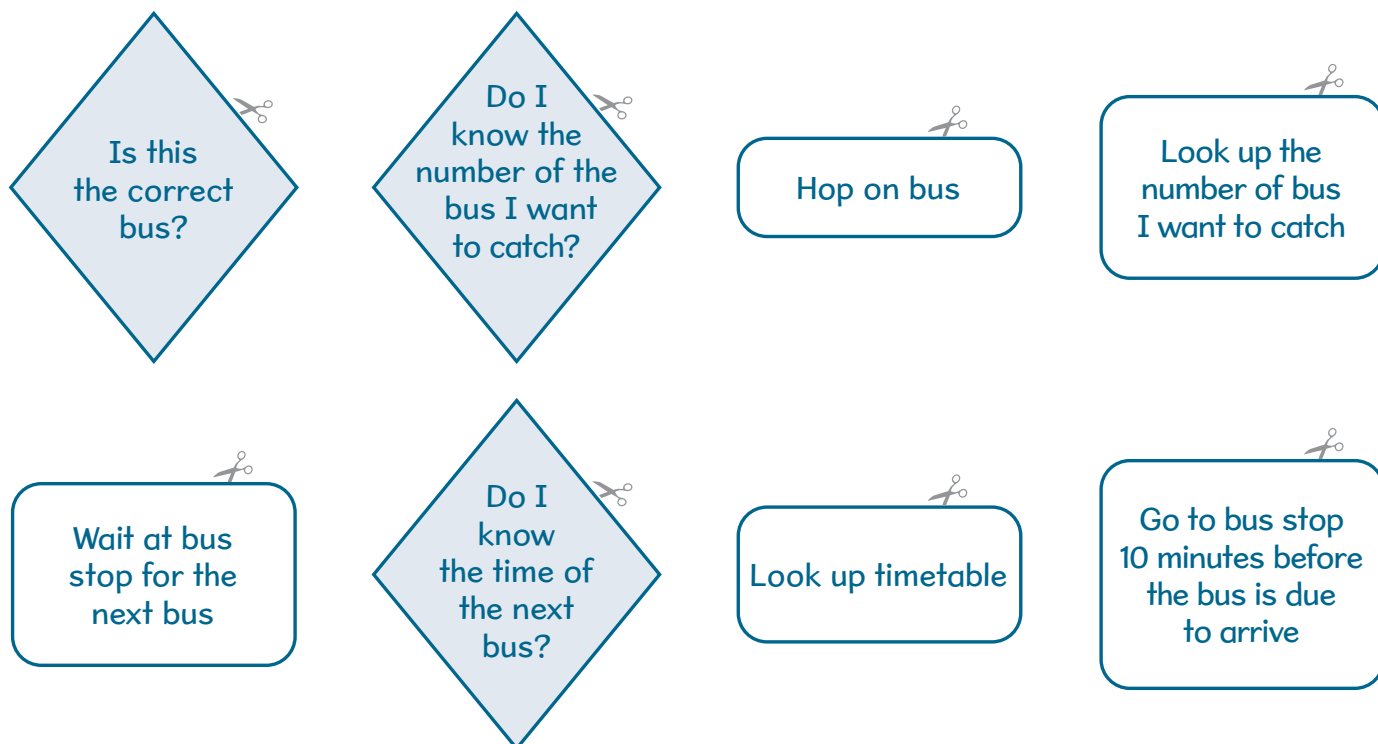
Amount	\$10	\$5	\$2	\$1	50c	20c	10c
\$6.00			✓✓✓				
\$4.60							
\$9.00							
\$25.00							
\$5.30							
\$7.50							
\$24.90							
\$19.70							

- 2 Try to fill in this table in a different way than you have done above.

Amount	\$10	\$5	\$2	\$1	50c	20c	10c
\$6.00			✓✓✓				
\$4.60							
\$9.00							
\$25.00							
\$5.30							
\$7.50							
\$24.90							
\$19.70							

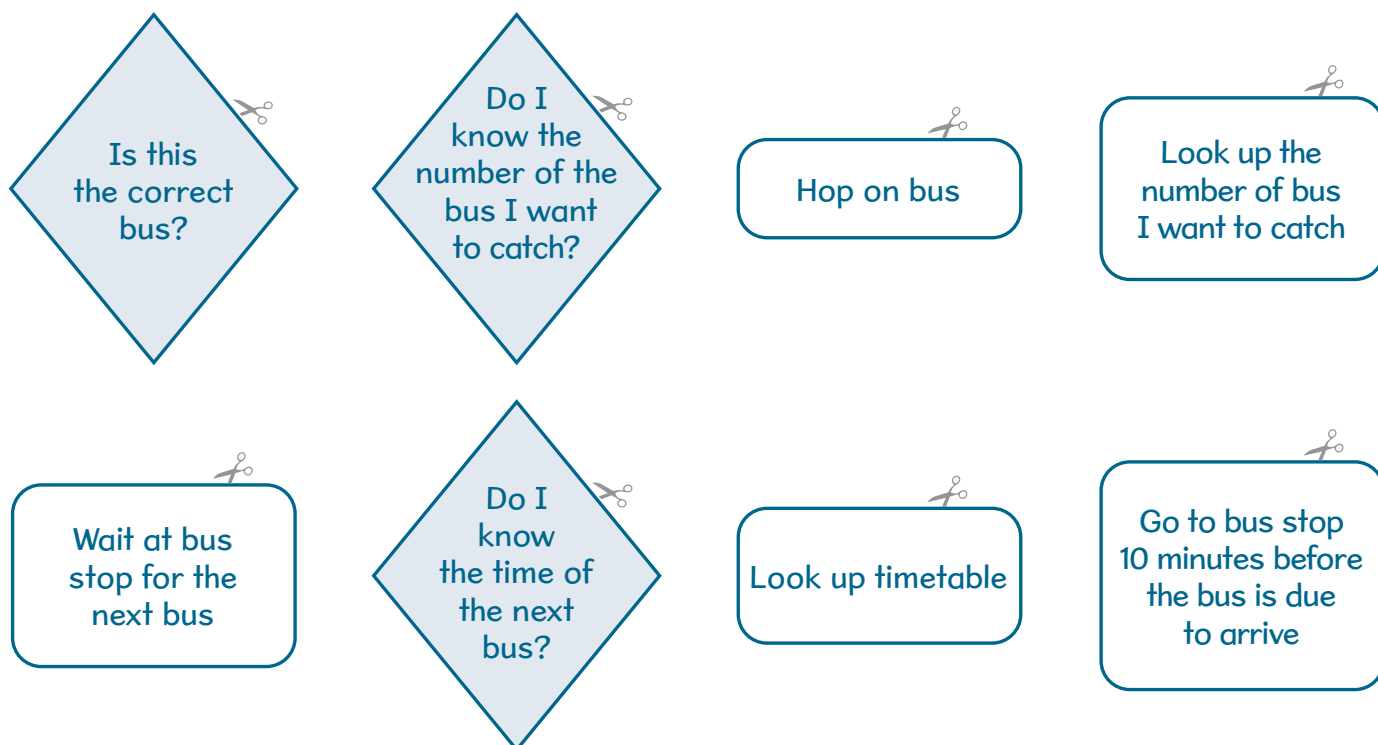
NC4-49

- 1 Cut out each shape. Use them to create an algorithm for catching a bus. Glue the shapes in place. Draw arrows to connect the shapes.



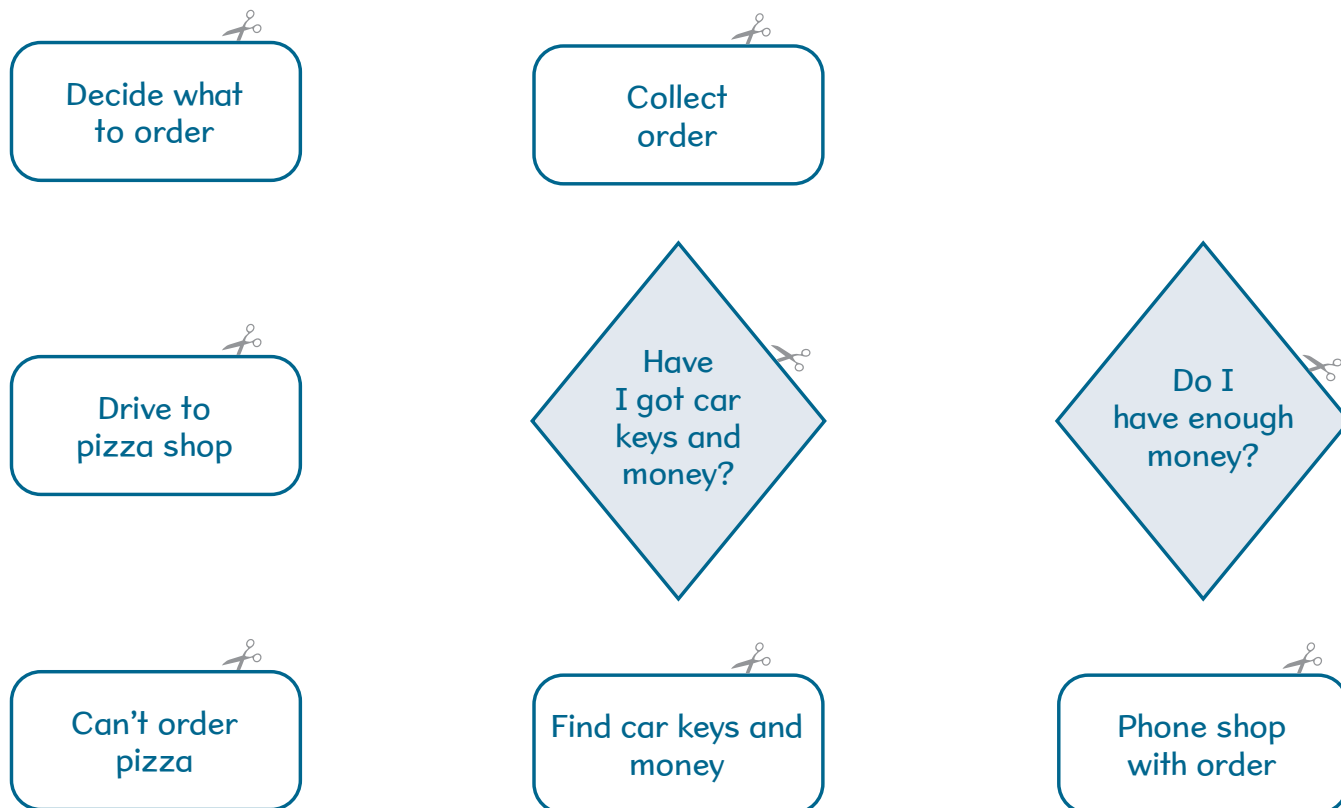
NC4-49

- 1 Cut out each shape. Use them to create an algorithm for catching a bus. Glue the shapes in place. Draw arrows to connect the shapes.

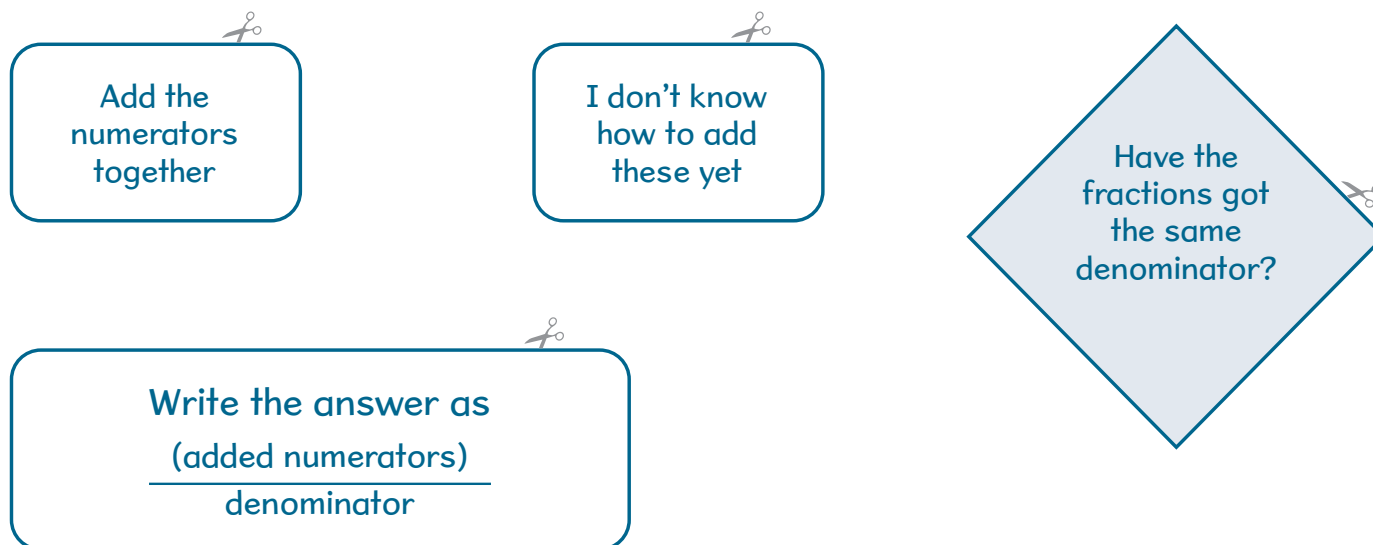


NC4–50

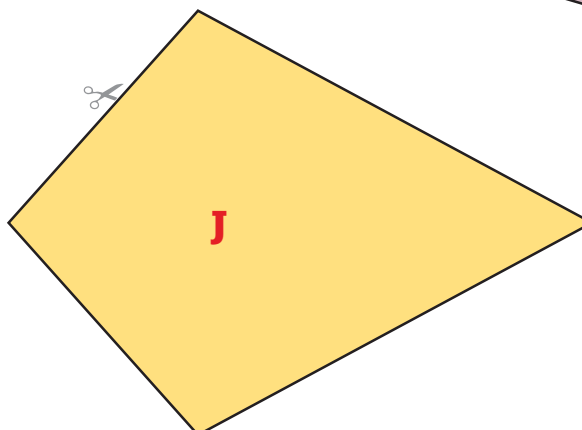
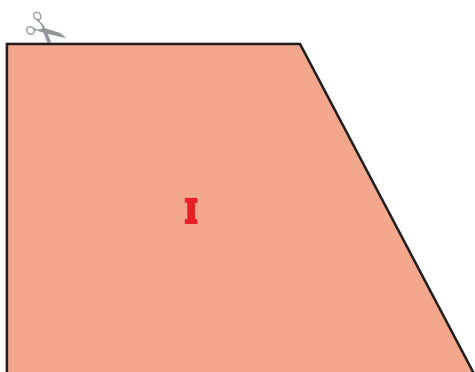
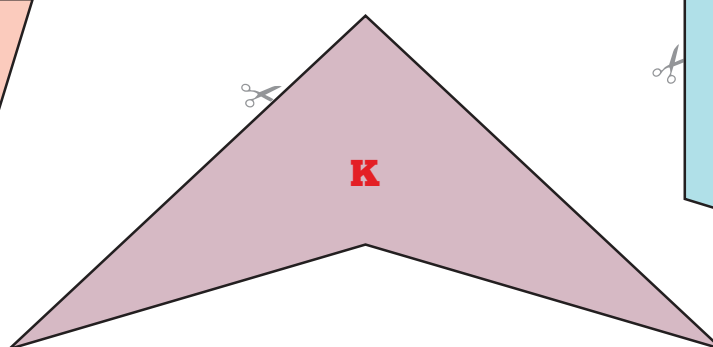
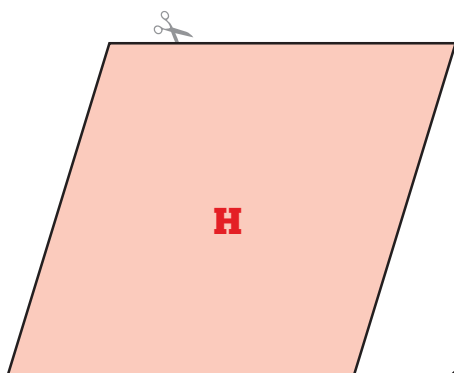
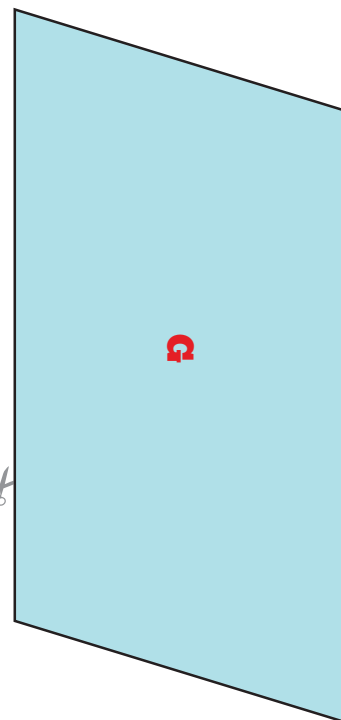
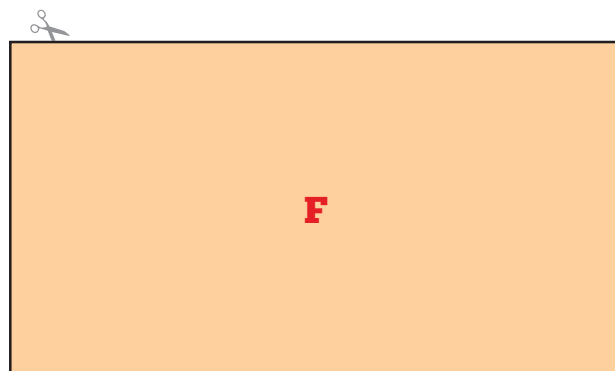
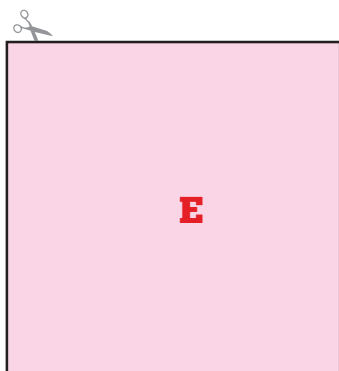
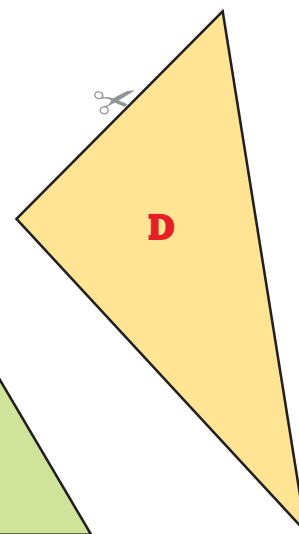
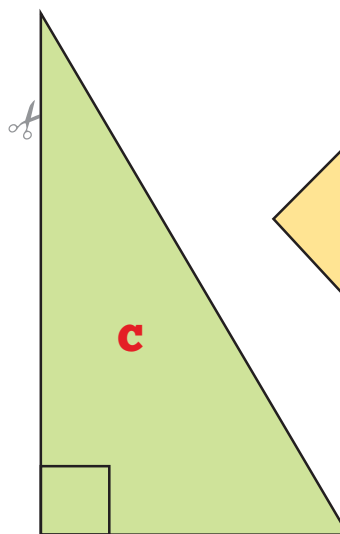
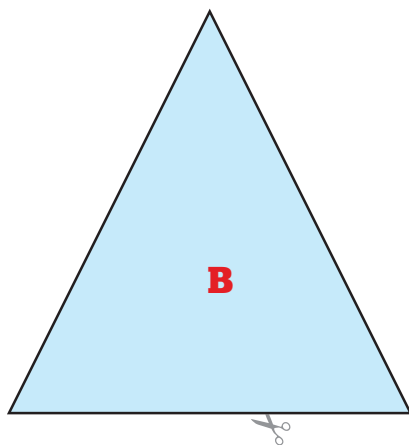
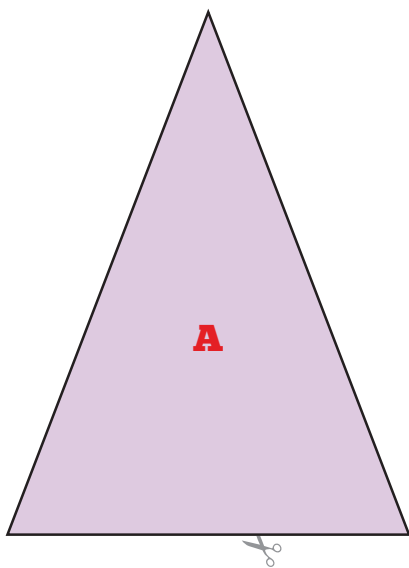
- 2 Cut out each shape and put these together to create an algorithm for ordering pizza by phone. Glue the shapes in place. Draw arrows to connect the shapes.



- 3 Cut out each shape and put these together to create an algorithm for adding two fractions. Glue the shapes in place. Draw arrows to connect the shapes.



NC4–54

Practical – How many lines? (page 1 of 2)

NC4–54

Practical – How many lines?
(page 2 of 2)

Number of lines of symmetry	Letters of shapes
0	
1	
2	
3	
4	
More than 4	

NC4–54

Practical – How many lines?
(page 2 of 2)

Number of lines of symmetry	Letters of shapes
0	
1	
2	
3	
4	
More than 4	

NC4–54

Practical – How many lines?
(page 2 of 2)

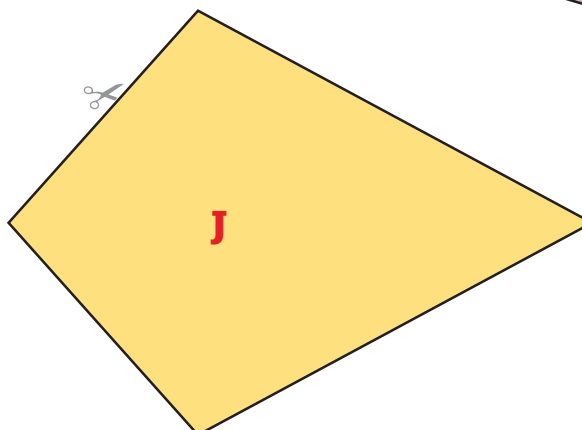
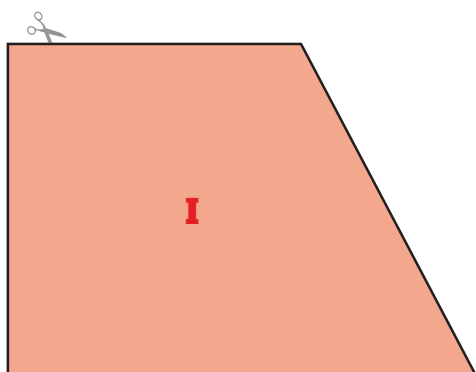
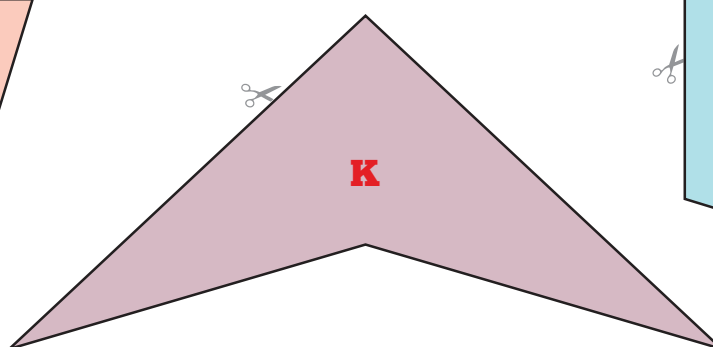
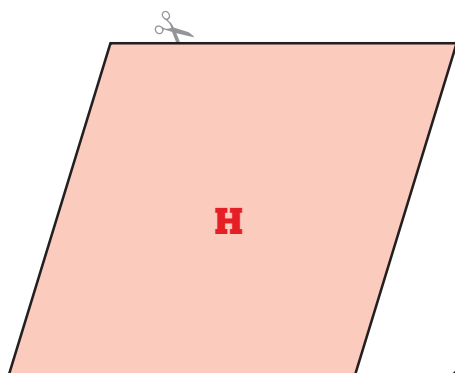
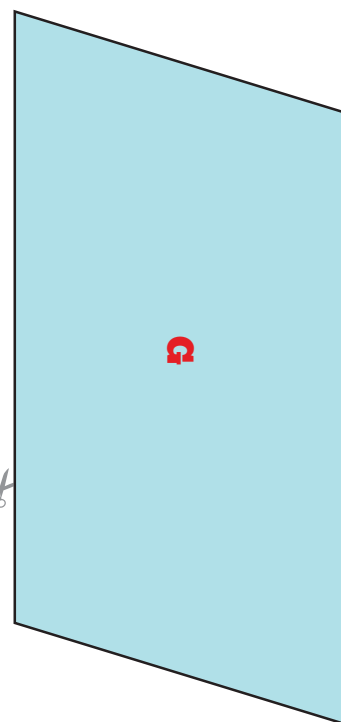
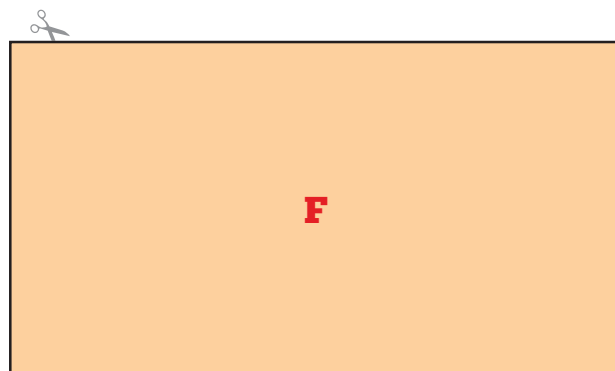
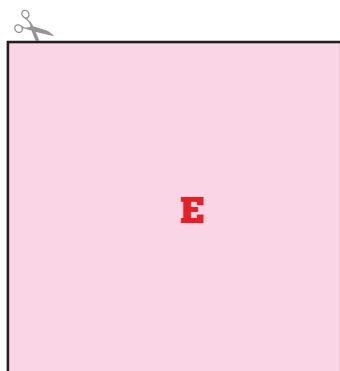
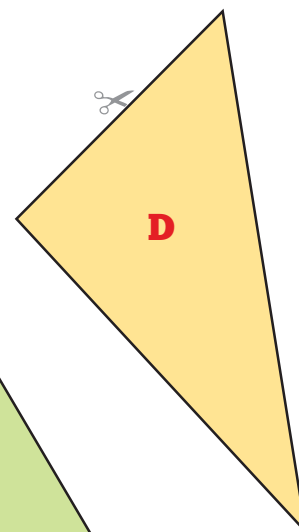
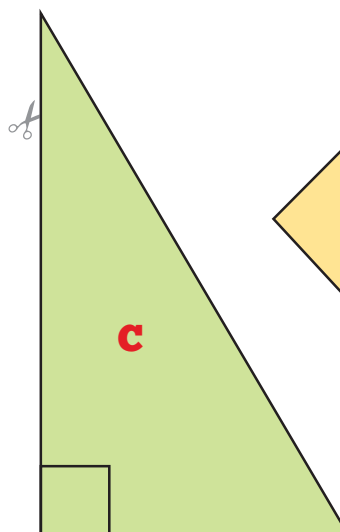
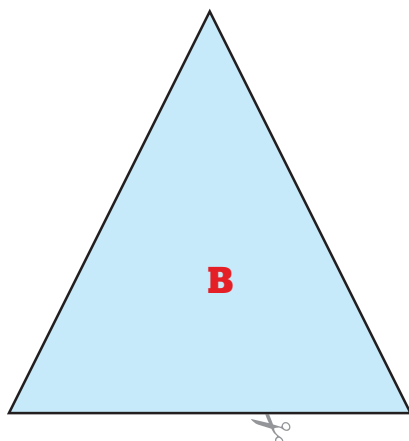
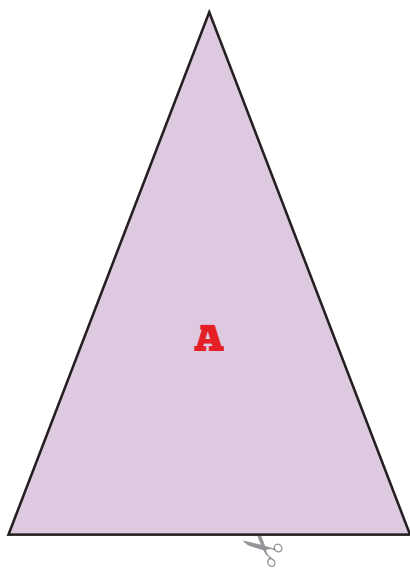
Number of lines of symmetry	Letters of shapes
0	
1	
2	
3	
4	
More than 4	

NC4–54

Practical – How many lines?
(page 2 of 2)

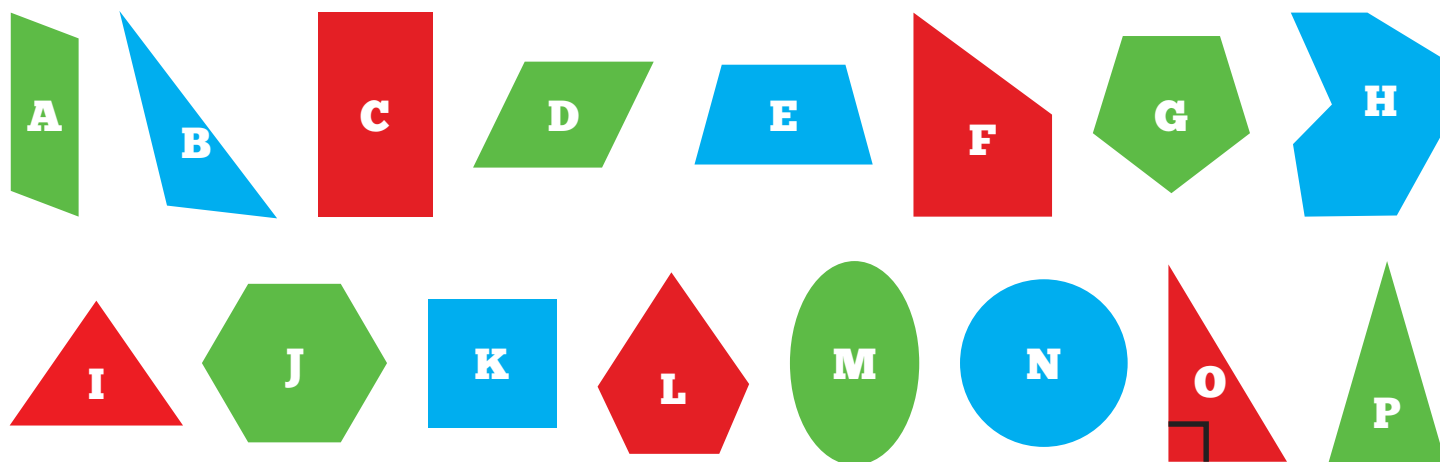
Number of lines of symmetry	Letters of shapes
0	
1	
2	
3	
4	
More than 4	

NC4–55

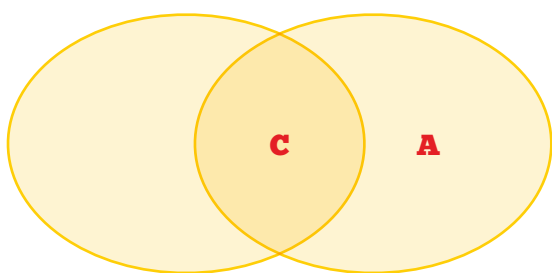
Practical – How many times?

NC4–56

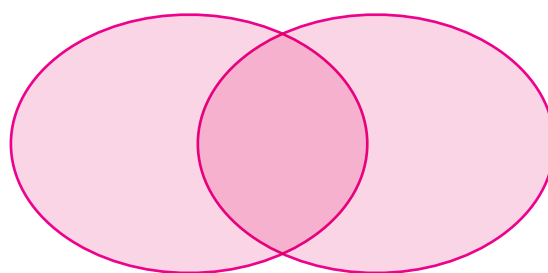
1 Put the letter of the shapes into the Venn diagrams. The first one is started for you.



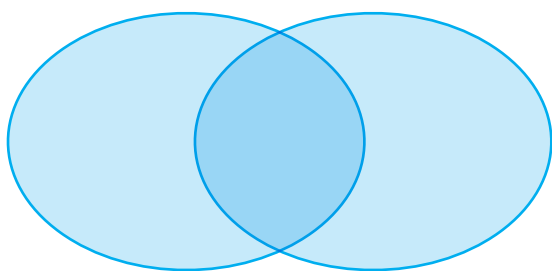
a Shapes with 2 lines of symmetry Shapes with rotational symmetry



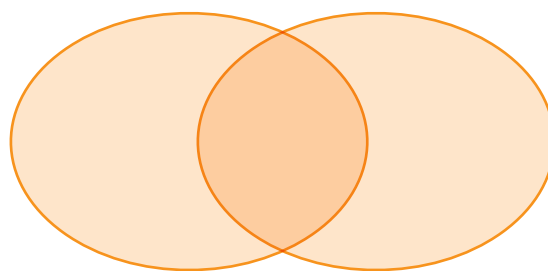
b Shapes with all equal sides Shapes with at least 1 line of symmetry



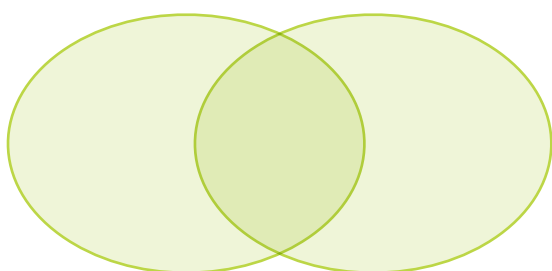
c Shapes with at least 1 line of symmetry Shapes with 2 equal sides



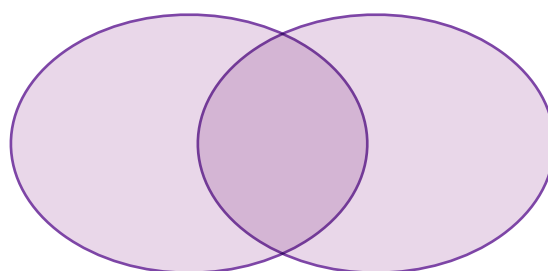
d Shapes with at least 1 line of symmetry Shapes with 4 sides



e Shapes with no line of symmetry Shapes with no rotational symmetry



f Shapes with rotational symmetry Shapes with all equal sides



NC4–58

Practical – Turning turning

Turn each shape through one whole turn.

In how many places did they look exactly the same?

a



b



c



d



e



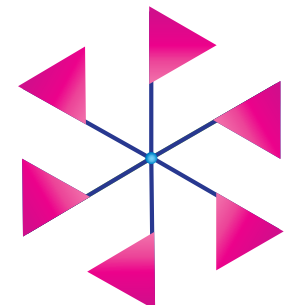
f



g



h



i



NC4–59

Rotate each shape to see if it has rotational symmetry.

a



b



c



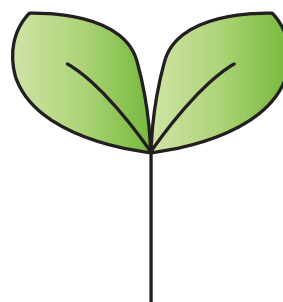
d



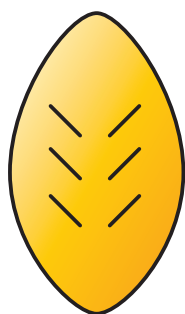
e



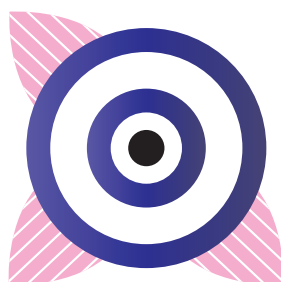
f



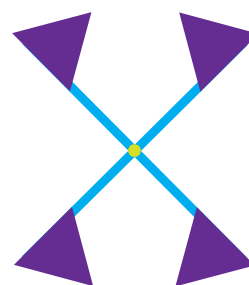
g



h



i



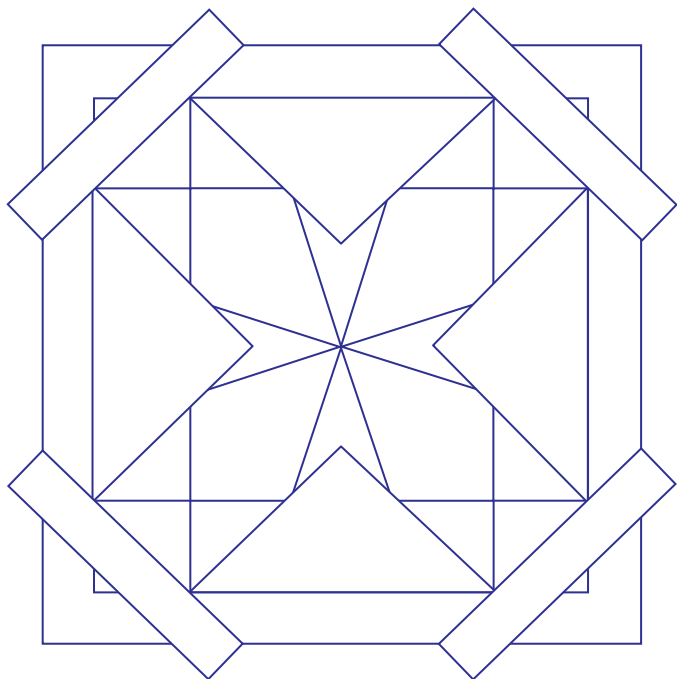
j



NC4-60

Practical – Colour it

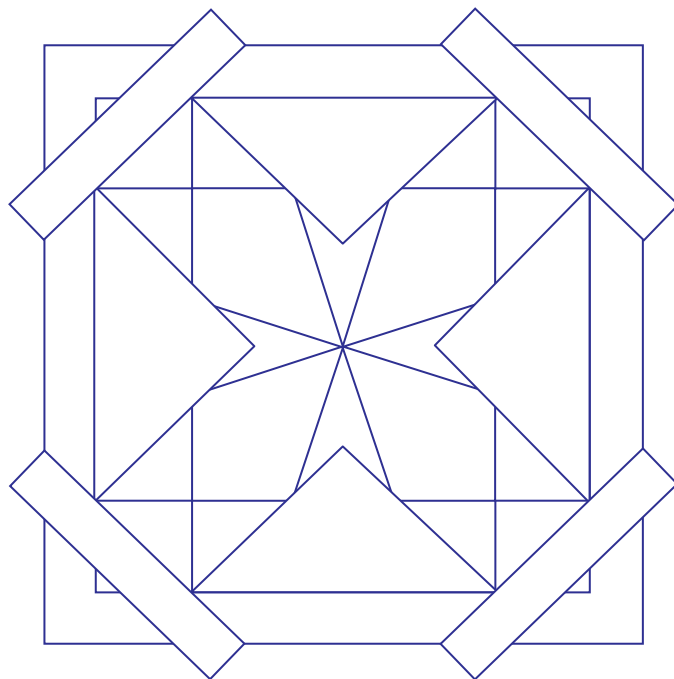
- a Colour the diagram so that it has rotational symmetry.
Use at least two colours.



NC4-60

Practical – Colour it

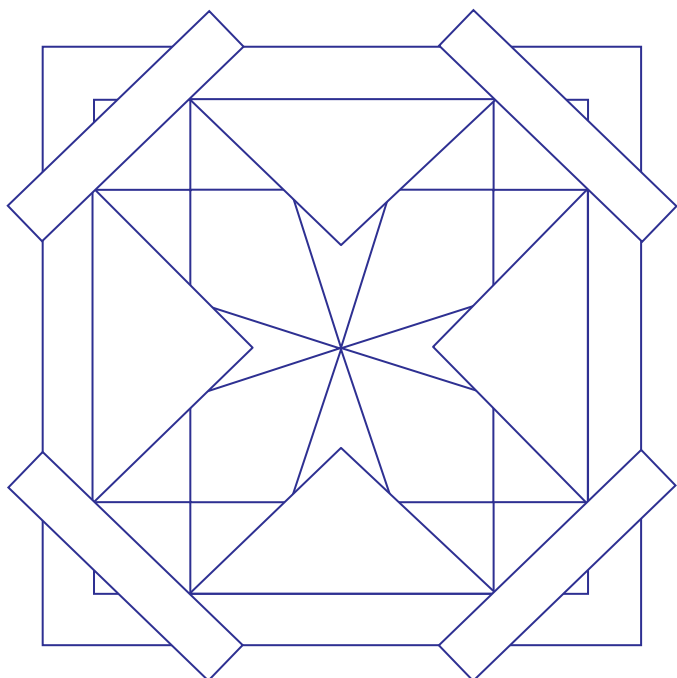
- a Colour the diagram so that it has rotational symmetry.
Use at least two colours.



NC4-60

Practical – Colour it

- a Colour the diagram so that it has rotational symmetry.
Use at least two colours.



NC4-60

Practical – Colour it

- a Colour the diagram so that it has rotational symmetry.
Use at least two colours.

