Mrs Ortolani Maths Group - Term 4 Week 3 (Mr Dobbin)

Daily zoom at 12.15pm (Except Wednesday)

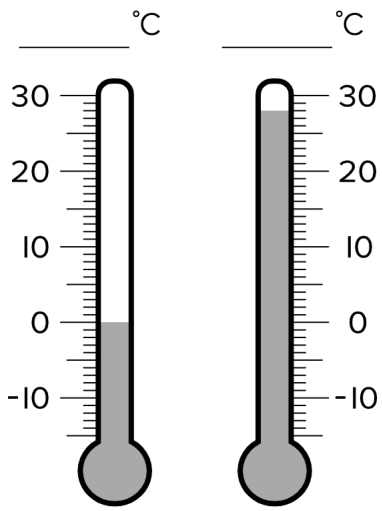
Zoom link in Google Classroom "Yr 5 Math with Miss C"

Monday	Tuesday	Wednesday	Thursday	Friday
Zoom with Mr Dobbin Topic: Recording remainders as fractions Warm up task Textbook pages: 230 and 231 Matharoo Problems UP	Zoom with Mr Dobbin Topic: Recording remainders as decimals Warm up task Textbook pages: 232 and 233 Problem solving - Working backwards	Well being Wednesday No math today	Zoom with Mr Dobbin Topic: Identifying lines of symmetry Warm up sheet Textbook pages: 234 and 235 Problem solving - Solving problems	Zoom with Mr Dobbin Topic: Exploring rotational symmetry Warm up sheet Textbook pages: 236 and 237 Problem solving - Missing Digits

Name

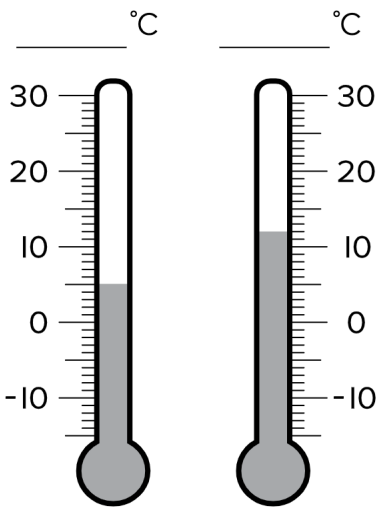
1. Write the temperatures. Then write the difference.

a. **Min.** **Max.**



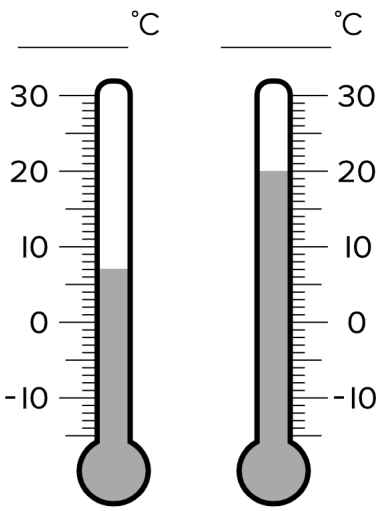
Difference _____ °C

b. **Min.** **Max.**



Difference _____ °C

c. **Min.** **Max.**



Difference _____ °C

2. Write the matching numeral or number name.

a. 12 306 270

_____

_____

_____

b. five million, sixty-two thousand, nine hundred and three

_____

3. Complete these calculations using the formal division algorithm.

a.

	H	T	O
3)	7	2	6

b.

	H	T	O
4)	9	7	6

c.

	H	T	O
5)	8	5	5

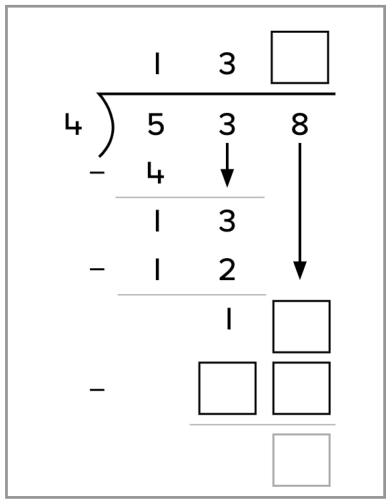
Name

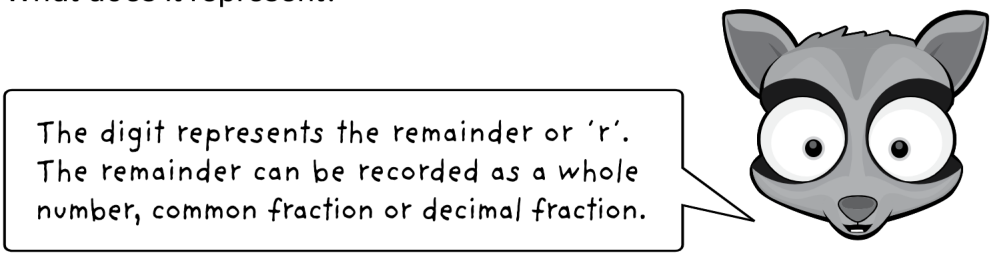
Step In Recording Remainders as Common Fractions

Julia used the formal division algorithm to solve 538 ÷ 4.

Complete her algorithm.

What digit did you write in the red box.
What does it represent?





Read these word problems.

A ribbon is 538 cm long.
Caleb cuts the ribbon into 4 equal lengths.

What is the length of each piece?

538 scouts attend the annual jamboree.
Each tent sleeps 4 scouts.

How many tents will they need?

How would you write the remainder in each problem? How did you decide?

Step Up

1. Write the remainder in each answer as a common fraction.
The first example has been done for you.

a. 67 ÷ 5 = 13 r 2	67 ÷ 5 = $13\frac{2}{5}$	**b.** 85 ÷ 4 = 21 r 1	85 ÷ 4 =
c. 94 ÷ 3 = 31 r 1	94 ÷ 3 =	**d.** 77 ÷ 6 = 12 r 5	77 ÷ 6 =
e. 118 ÷ 5 = 23 r 3	118 ÷ 5 =	**f.** 175 ÷ 8 = 21 r 7	175 ÷ 8 =

2. Explain the thinking you used for Question 1.

Name

3. Solve these word problems. Express the answer in the most appropriate way.

a. Three tennis balls fit in a can. How many cans are needed for 160 tennis balls?

_____ cans

b. 182 students are going on school camp. Each cabin sleeps 8 students. How many cabins are needed?

_____ cabins

c. The movie runs for 155 minutes. Alexa paused the movie halfway through. How many minutes had passed before Alexa pressed pause?

_____ minutes

d. The drive from Koki's house to the beach is 178 km. His dad says that they are exactly $\frac{1}{4}$ of the way. How far have they travelled?

_____ km

Step Ahead

Look at this number chart.

120	121	122	123	124	125	126
127	128	129	130	131	132	133
134	135	136	137	138	139	140
141	142	143	144	145	146	147
148	149	150	151	152	153	154

a. Colour **blue** numbers that leave no remainder when divided by 6.

b. Colour **red** numbers that leave a remainder of 1 when divided by 6.

c. Colour **green** numbers that leave a remainder of 3 when divided by 6.

d. Colour **yellow** numbers that leave a remainder of 5 when divided by 6.

e. What do the remaining numbers show?

MATHAROO
helping kids jump into maths

MATHAROO Worksheet UP – 31 21

Student Name: _____

Grade:_____ **Date:**_____

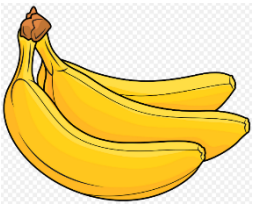
1. Facebook and Instagram went offline on Wednesday of last week. Ted usually spends around 42 minutes per day on Instagram. But, because of the outage, he was only able to spend a third of his usual time on Instagram on that day. How many minutes did he miss out on?

2. Aussie marathon swimmer Chloe McCardle has just completed her 43rd crossing of the English Channel. It took her 10 hours and 54 minutes of continuous swimming. If her swim began at 5:43 am, at what time did her swim finish?

3. The 13th series of Masterchef returns to TV this week. If the first show in this series is scheduled to run for 90 minutes, but actually ran for 1 hour 54 minutes, by how many minutes would it over-run the scheduled time?

4. It takes Mabel 1½ seconds to tear open one of the supermarket plastic toys, 5¼ seconds to peel off the labels from the label sheet, and 3¾ seconds to mount the labels on the model correctly. If she has 5 of those models to open and label, and she did them one after the other with no time lost, how long did it take her in total?

5. Bananas at one supermarket are costing $2.80 per kilogram this week. If there are 4 of these (quite big) bananas in a kilogram, find the price of 30 bananas.



6. A Lego exhibition in Mt Gambier recently had around 45 exhibitors. Most of these "Lego lovers" said it took them 10 weeks to plan their display, and another 10 weeks to actually build their model for the Exhibition. The exhibition was held on October 3rd & 4th. On what date would planning of models have begun?

7. Any Australian households that didn't complete last month's Census are being fined up to $222 **PER DAY** as a penalty. If 2¾ dozen families in Joe's suburb are fined that amount, how much money do those fines add up to in total?

8. **OPEN-ENDED QUESTION**: Find 4 numbers **BETWEEN** 3 and 3.00264

MATHAROO
helping kids jump into maths

MATHAROO Worksheet EXT – 31 21

Student Name: _____

Grade:_____ **Date:**_____

1. Dannii Minogue, a popular entertainer and singer, has recently SOLD a house in the Melbourne suburbs for a reported $2.56 million. If her estate agent charged a 1.5% commission, how much would that estate agent earn from that big sale?

2. Singer Kylie Minogue, Dannii's older sister, recently sold her house. It sold for a reported $1.715 million. If her estate agent charged her 2% commission, plus an extra $18,000 for advertising, how much money would she actually receive from that sale?

3. According to recent statistics, 51 percent of Australians feel satisfied with their lives. The current Australian population is 26 milllion people. At that rate, how many Australians do **NOT** feel satisfied with their lives?

Census

4. An electric light pole in Paris fell down last week. When engineers checked it out, they found that its base had been weakened by dog wee. (Yes! It's TRUE!) If 65 dogs per week had a wee of 80 millilitres on that pole for the past 5 years, how many **LITRES** of wee would that be in total?

5. I am a **FRACTION** equivalent to $\frac{2}{5}$. My numerator is 21 less than my denominator. What fraction am I?

6. After recent grand finals, one club has been selling millions of dollars worth of club footy jumpers. Players have received up to $20,000 each as their part of the sale of footy jumpers. Footy jumpers cost $85 each RRP. What multiple of $85 is $20,400?

7. Evaluate $3^3 + 4^3 - 5^2 =$ ___

8. Elijah's dad is driving their car at 70 kilometres per hour. His neighbour, Jonno, is driving another car. The average speed of the two cars is 82 kilometres per hour. How fast is Jonno driving, in kilometres per hour?

9. <u>Open-ended Question:</u> What **MAY** be the length of a farm rectangular paddock fence if the paddock has an area of 12,800 square metres? Give 3 possible sets of lengths and widths.

Adding, Subtracting and Multiplying (D)

Calculate each sum, difference or product.

8 × 1 =	7 + 2 =	9 + 9 =	18 - 11 =
11 + 12 =	9 - 2 =	7 + 9 =	5 × 11 =
7 × 5 =	4 + 10 =	1 × 12 =	8 × 9 =
1 × 9 =	5 - 3 =	8 × 11 =	10 × 7 =
16 - 10 =	9 - 1 =	9 + 2 =	23 - 11 =
1 + 4 =	2 × 10 =	9 + 7 =	1 × 6 =
11 × 4 =	9 × 11 =	1 + 10 =	4 × 10 =
11 × 12 =	8 × 8 =	11 × 9 =	7 × 9 =
15 - 11 =	24 - 12 =	11 - 9 =	9 × 12 =
7 × 12 =	5 + 2 =	9 - 5 =	5 + 5 =
16 - 12 =	11 + 8 =	20 - 9 =	5 × 10 =
9 × 4 =	12 - 3 =	5 + 3 =	6 + 5 =
21 - 12 =	18 - 12 =	6 + 10 =	12 + 7 =
1 × 10 =	3 + 9 =	9 × 8 =	6 × 9 =
8 × 3 =	5 × 4 =	11 × 2 =	8 × 8 =
7 × 2 =	2 + 5 =	11 × 11 =	10 + 3 =
3 × 8 =	5 × 2 =	1 + 5 =	6 × 1 =
3 × 9 =	6 + 7 =	11 - 3 =	12 + 6 =
5 × 12 =	8 - 7 =	6 × 12 =	1 × 9 =
4 × 3 =	19 - 11 =	6 × 3 =	4 - 3 =
14 - 6 =	13 - 3 =	19 - 9 =	12 + 9 =
2 × 7 =	3 + 9 =	2 + 7 =	2 × 10 =
12 × 3 =	3 - 2 =	10 × 10 =	8 - 6 =
1 × 12 =	16 - 11 =	21 - 11 =	12 × 10 =
9 + 4 =	16 - 5 =	12 × 7 =	6 × 9 =

Name

Step In Recording Remainders as Decimal Fractions

Five friends equally shared the cost of this gift. How much did each person pay?

I know it's less than $30, because 5 × $30 = $150 and that's too much.

Molly uses the formal division algorithm to work out the answer.

Complete the algorithm.

What does the remainder represent?

How could you share $1 equally among 5 friends?

			2 ☐
5	1	4	6
−	1	0	↓
		4	☐
−		☐	☐
			☐

I dollar has the same value as 100 cents. I can share 100 equally among 5.

How much did each person pay?

Step Up

1. Complete these.

a. $1 shared between 2 is 50 cents each or $0.50.	
b. $1 shared among 4 is _____ cents each or $_____.	
c. $1 shared among 5 is _____ cents each or $_____.	
d. $1 shared among 10 is _____ cents each or $_____.	
e. $1 shared among 20 is _____ cents each or $_____.	
f. $2 shared among 4 is _____ cents each or $_____.	
g. $2 shared among 8 is _____ cents each or $_____.	

Name

2. Solve these word problems. Express the answer in the most appropriate way.

a. It costs $235 to stay at a hotel for two nights. What is the cost of one night?

$_____ each night

b. The square lion enclosure has a perimeter of 297 m. What is the length of each side?

_____ m

c. In one day 563 eggs are collected at a chicken farm. The eggs are packed into cartons of 6. How many cartons are used?

_____ cartons

d. Fiza buys a new dishwasher for $641. She pays for it in 5 equal monthly payments. How much does she pay each month?

$_____ each month

Step Ahead

Use patterns to help you show three different ways to express answers that have amounts left over. Some rows have been completed for you. The letter **r** is the abbreviation for **remainder**.

a.

	Answer		
122 ÷ 4	30 r 2	$30\frac{2}{4}$	30.5
123 ÷ 4	30 r 3	$30\frac{3}{4}$	30.75
124 ÷ 4	31	31	31
125 ÷ 4			
126 ÷ 4			
127 ÷ 4			

b.

	Answer		
208 ÷ 5	41 r 3	$41\frac{3}{5}$	41.6
209 ÷ 5			
210 ÷ 5			
211 ÷ 5			
212 ÷ 5			
213 ÷ 5			

Working backwards

In each of these questions, I am thinking of a number. Examine the clues given, and then work backwards to find my number.

1 If you add 3 to the number and multiply the result by 2, you get 18. _____

2 If you double the number and then double the result, you get 20. _____

3 If you halve the number then add 4, you get 10. _____

4 If you subtract 7 from the number and double the result, you get 12. _____

5 If you halve the number then add 9, you get 14. _____

6 If you halve the number, and double the result, you get 8. _____

7 If you double the number,
double that result, and then double again, you get 16. _____

8 If you multiply the number by 5,
subtract 3 and halve the result, you get 6. _____

9 If you add 6 to the number and then halve the result, you get 7. _____

10 If you subtract 3 from the number
and multiply the result by 5, you get 30. _____

11 If you multiply the number by 5 and then subtract 3, you get 17. _____

12 If you halve the number and then halve the result, you get 4. _____

13 If you multiply the number by itself
(in other words, square the number), you get 16. _____

14 If you square the number and then add 1, you get 10. _____

15 If you subtract 4 and square the result, you get 16. _____

16 If you subtract 5, square the result and then add 8, you get 17. _____

17 If you multiply the number by 4,
subtract 10 and divide the result by 5, you get 2. _____

18 If you square the number and then add 7, you get 23. _____

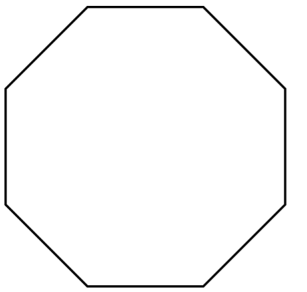
19 If you square the number and halve the result, you get 50. _____

20 If you square the number, then add 2 and halve the result, you get 3. _____

Name

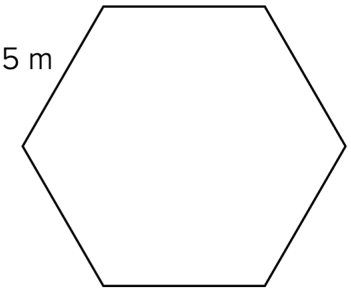
1. Both of these shapes have sides that are the same length. Calculate the perimeter of each shape and write a number sentence to show your thinking.

a.



_____ = _____ m

b.



_____ = _____ m

2. Read the number name. Write the numeral.

a. seventy million, four hundred and one thousand _____

b. seven million, forty-one thousand _____

c. seventeen million, one hundred and forty thousand _____

d. seventy-one million, four hundred and ten thousand _____

e. seventeen million, one hundred and four thousand _____

3. Use patterns to help you show three different ways to express answers that have amounts left over. The first row in each table has been done for you. The letter **r** is the abbreviation for **remainder**.

a.	Answer		
93 ÷ 4	23 r 1	$23\frac{1}{4}$	23.25
94 ÷ 4			
95 ÷ 4			
96 ÷ 4			
97 ÷ 4			
98 ÷ 4			

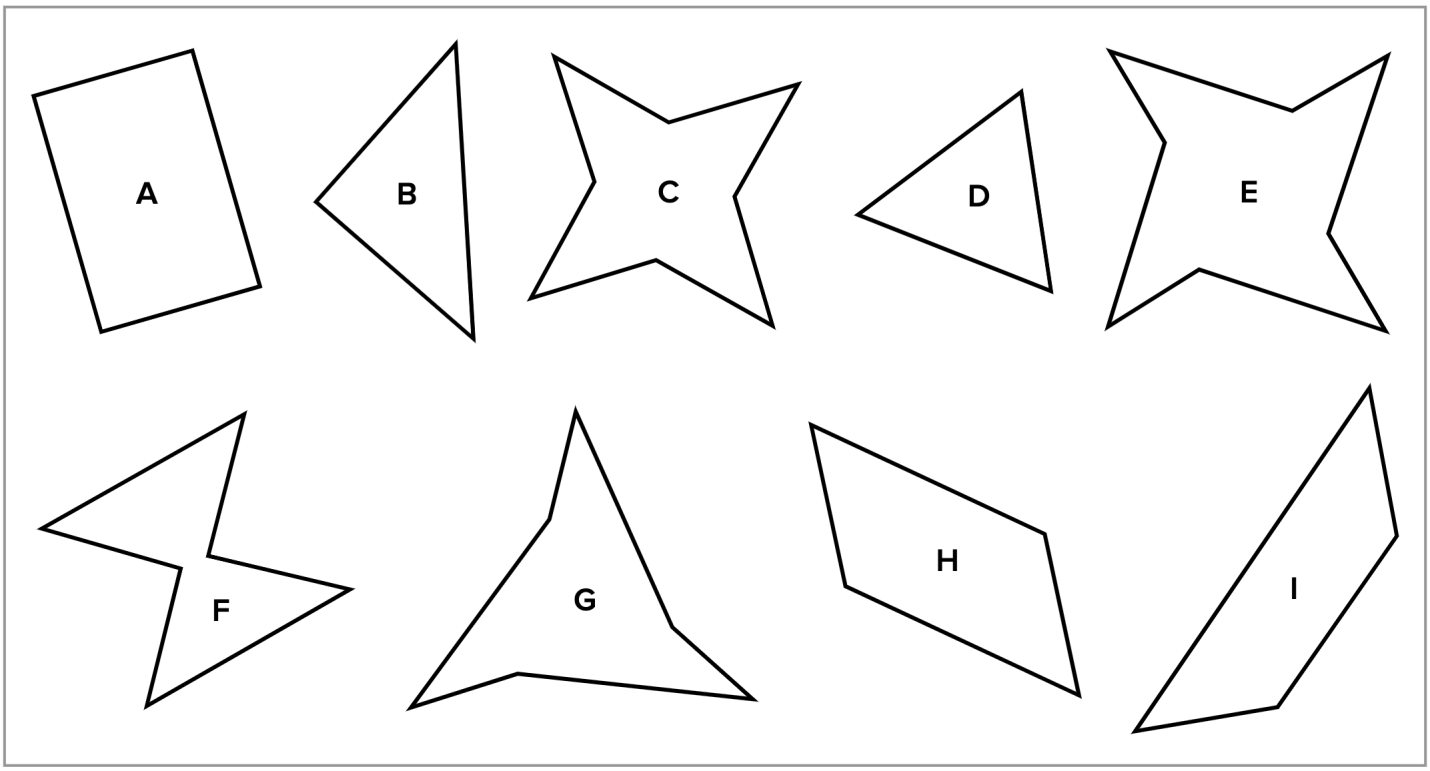
b.	Answer		
144 ÷ 5	28 r 4	$28\frac{4}{5}$	28.8
145 ÷ 5			
146 ÷ 5			
147 ÷ 5			
148 ÷ 5			
149 ÷ 5			

Name

Step In Identifying Lines of Symmetry

What do you know about lines of symmetry?

This type of symmetry is also called **mirror symmetry**, **reflective symmetry** or **line symmetry**.



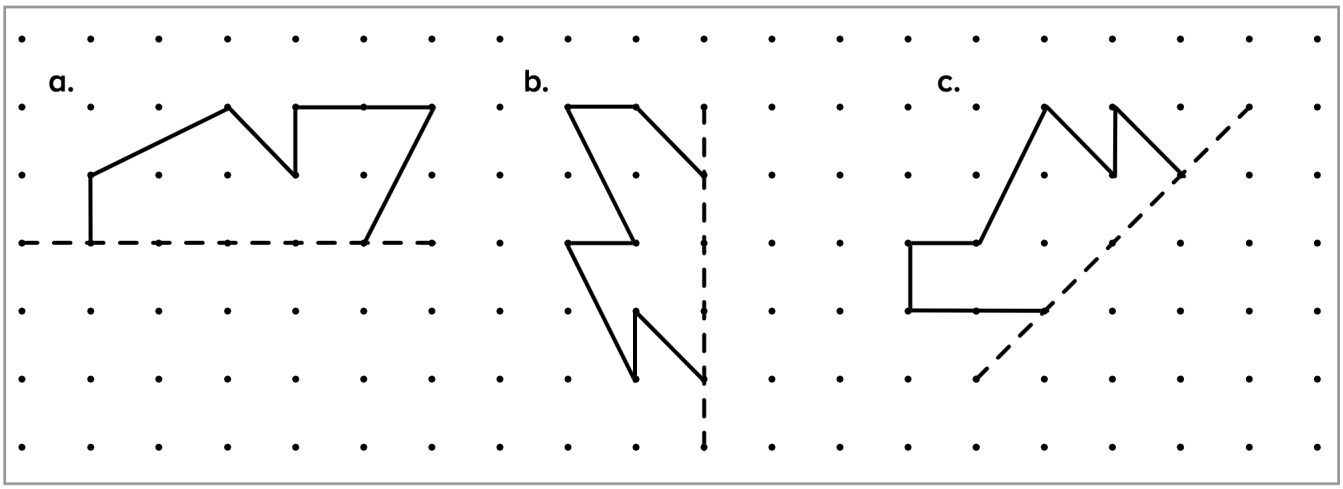
Which of these shapes have only one line of symmetry?

Which have only two lines? Which have three or more lines?

What are some everyday things that have line symmetry?

Step Up

1. Draw the other half of each shape to show line symmetry.



Name

2. Draw **all** the lines of symmetry that you can see in each picture.

a. 

b. 

c. 

d. 

e. 

f. 

g. 

h. 

i. 

j. 

k. 

l. 

m. 

n. 

o. 

p. 

Step Ahead

Draw two different shapes that each have exactly two lines of symmetry.

a.

b.

Solving problems

1 Each morning Penny takes 15 minutes to shower and get dressed, 12 minutes to have breakfast, 7 minutes to clean up and pack her bag and 8 minutes to walk to the bus stop. Her bus leaves at 8:09 a.m.

At what time should she set her alarm clock to be sure to have just 3 minutes to spare at the bus stop? _____

2 Deborah came to the school fete with some cupcakes. She sold half her cakes, plus one, in the morning; she then gave a quarter of the remaining cakes to her teacher as a present.

That left her with 18 cupcakes, which she decided to share with her friends.
How many cupcakes did
Deborah bring to the fete? _____

3 Aurora had a book of raffle tickets. On the first day she sold 8 tickets to her friends. The next day she sold half the remaining tickets to her family. By the end of the week she sold the last 16 tickets to neighbours.

How many raffle tickets did Aurora start with? _____

4 Geoffrey sold half his apples at the markets. He then went to a shop and sold a quarter of what was left. After that he had only 12 kg of apples left. How many kilograms did he start with? _____

5 Irene went to a record shop. She first spent half her money, then $20 more. Next she went to a bookshop, where she spent half her remaining money and then again $20 more. By that time she had no money left.

How much did she have when she went to the record shop? _____

6 Farmer Brown sold three-quarters of his potatoes and gave half of what was left to charity. He then had 6 kg of potatoes left.

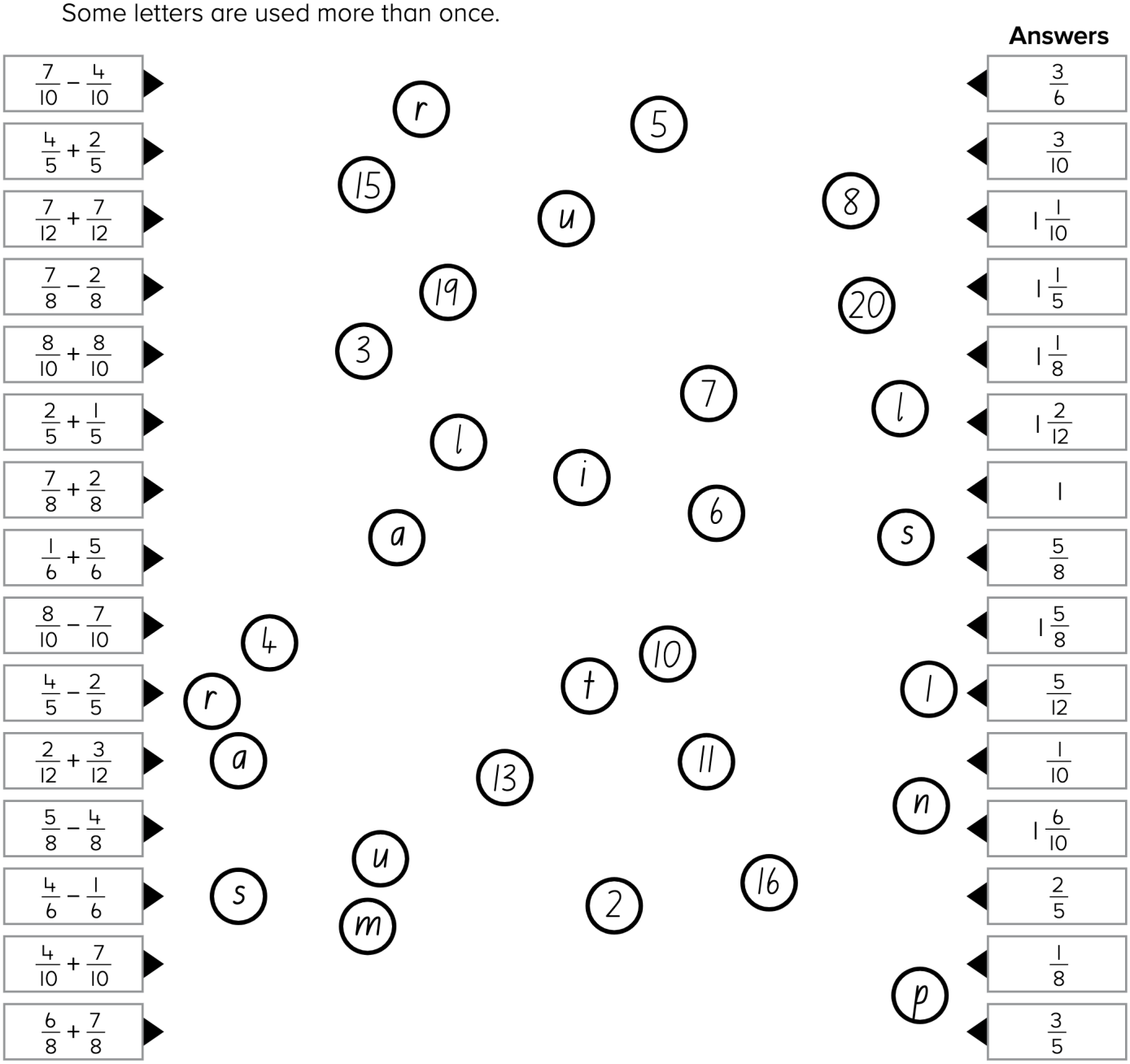
How many kilograms of potatoes did Farmer Brown have originally? _____

Name

HARDWARE

What are potoroos, quokkas and dunnarts?

★ Work out each of these and draw a straight line to the correct answer. The line will pass through a number and a letter. Write each letter above its matching number below. Some letters are used more than once.



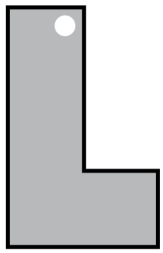
1	15	20	4	13	6	19	8	1	10
11	6	5	3	2	16	8	1	7	20

Name

Step In Exploring Rotational Symmetry

What do you think rotational symmetry means?

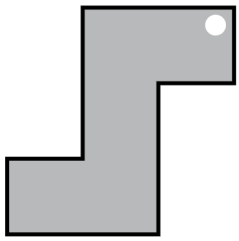
Use tracing paper to draw this shape with the dot in the correct position. Lay your traced shape directly over this shape.



If you make a clockwise turn, what fraction of a full turn will you make before the two shapes line up again? How do you know? Turn your paper shape to check.

Look at this shape.

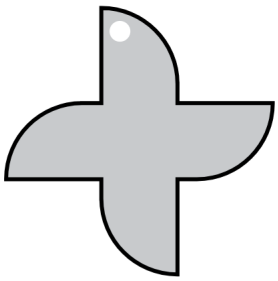
If you make a clockwise turn, what fraction of a full turn will you make before the two outlines match? How many part turns would you need to make before the dots will line up again? How do you know? Use tracing paper to check.



> Shapes that take two or more part turns to return to a starting position have **rotational symmetry**.

Look at this shape.

If you make a clockwise turn, what fraction of a full turn will you make before the two outlines match? How many part turns would you need to make before the dots will line up again? How do you know? Use tracing paper to check.

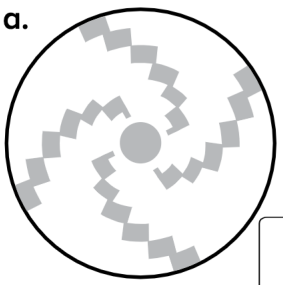


> A shape that has two or more lines of symmetry will also have **rotational symmetry**.

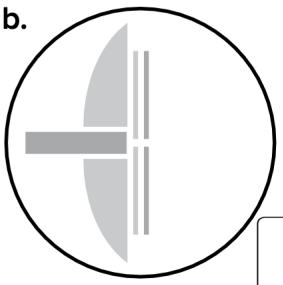
Step Up

1. Beside each design write the number of **part turns** it will take to return to its original position.

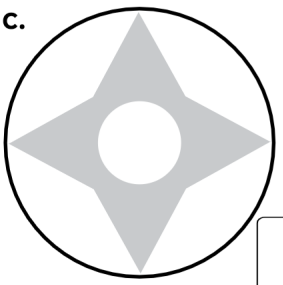
a.



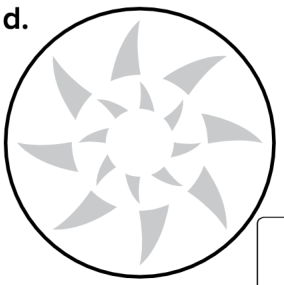
b.



c.



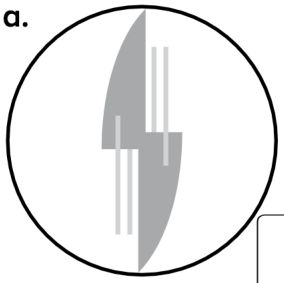
d.



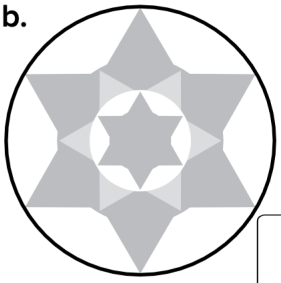
Name

2. Beside each design write the number of part turns it will take to return to its original position.

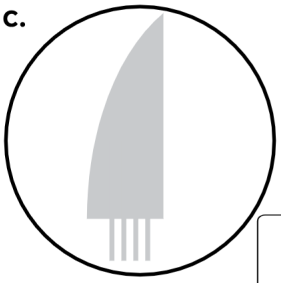
a.



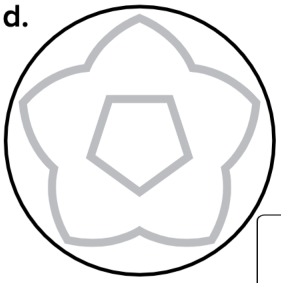
b.



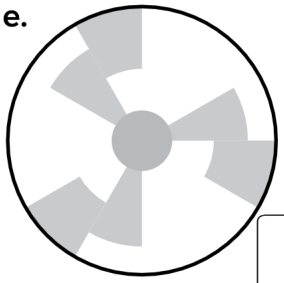
c.



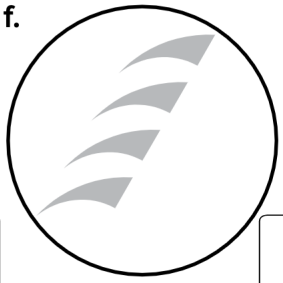
d.



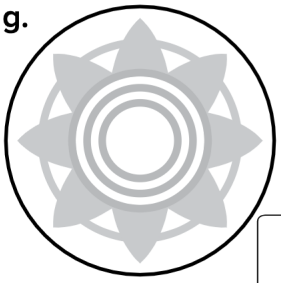
e.



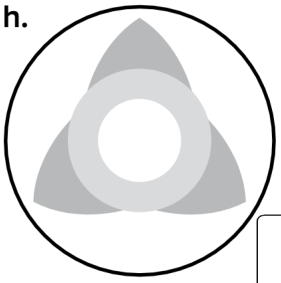
f.



g.



h.



3. Loop the designs in Question 1 and 2 that have rotational symmetry.

4. Draw two shapes that have rotational symmetry **but not** line symmetry.

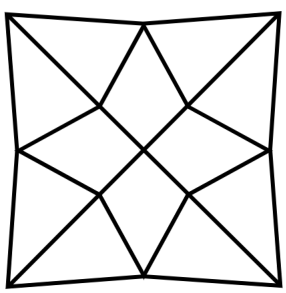
a.

b.

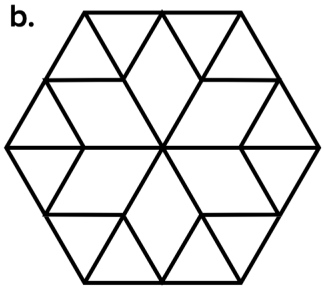
Step Ahead

These designs show line symmetry and rotational symmetry.
Colour them so that they show **only** rotational symmetry.

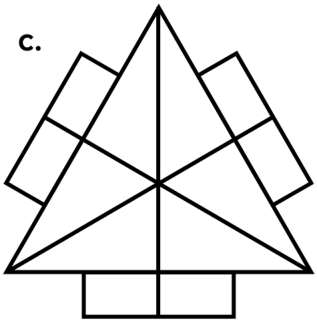
a.



b.



c.

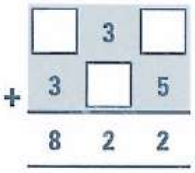


Missing digits

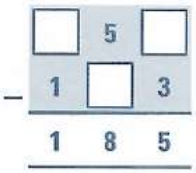
In these problems, some of the digits have been replaced with boxes.

Discover what they should be.

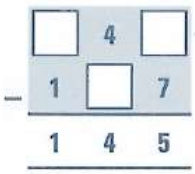
1



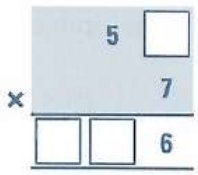
2



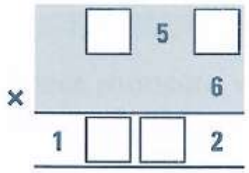
3



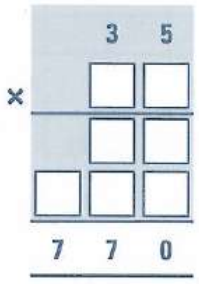
4



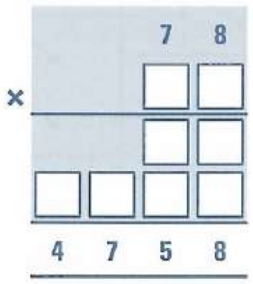
5



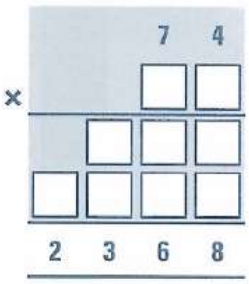
6



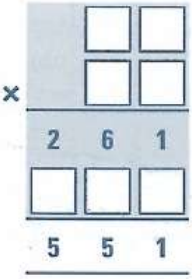
7



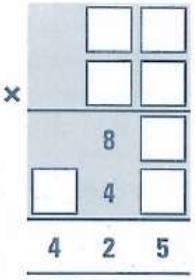
8



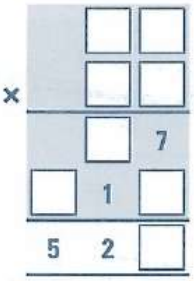
9



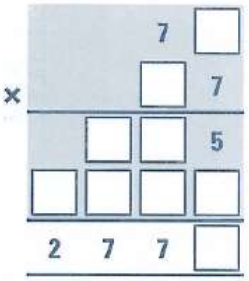
10



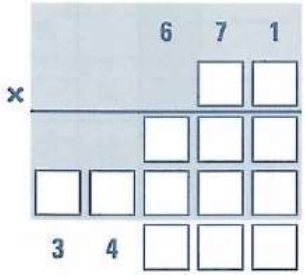
11



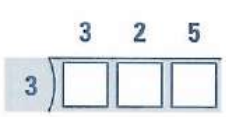
12



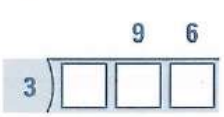
13



14

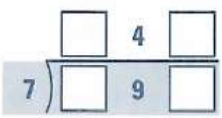


15

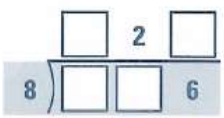


16

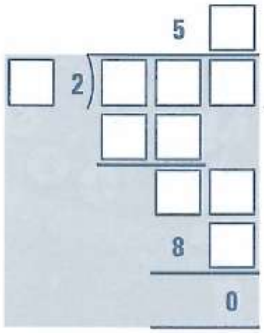
17



18



19



20