

Coventry Counts Year 6 workbook





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Year 6 - Place value What is the world's best car?

You're part of the marketing team who works at Coventry Transport Museum. Your team has been asked to create a poster which is to be displayed in the museum which shows the top 5 selling car brands in the world in 2019. There are 5 cards below to help you create this poster. Fill in the cards by completing the following tasks.

Position:	Position: Position:		Position:
General motors	Hyunda	i and Kia	Renault-Nissan- Mitsubishi-Alliance
Year established:	red: Year establis		Year established:
		KIA	RENAULT NISSAN MITSUBISHI
Number sold: 2,463,971	Number sold: 2,292,599		Number sold: 2,992,471
Position:	<section-header></section-header>		
Тоу			wagen
Year establis			shed:
TOY			wagen
Number sol	d: 3,115,343	Number sol	d: 3,296,440

3

Task 1

Cut out the 5 cards which display the top 5 selling car brands in the UK. Each card says how many cars were sold in 2019. Write the number of cars sold in words below.

General motors



Task 2

Share the cards out amongst team members and take it in turns to put one card down on the table ordering them on the number sold from highest to lowest. Once you've done this write the position on the card with 1 being the highest and 5 being the lowest.



Task 3

The table below shows each car brand and the year established in Roman numerals. Can you convert them to a number? Enter these on each card.

Car brand	Year established (in Roman numerals)	Year established
General Motors	MCMVIII	
Hyundai and Kia	MCMXCVIII	
Renault-Nissan- Mitsubishi-Alliance	MCMXCIX	
Toyota	MCMXXXIII	
Volkswagen	MCMXXXVII	

Task 4

The manager needs the number of cars sold rounded to the nearest 100,000, 10,000 and 1,000. Complete the table below.

Car brand	Number Sold	Number sold to nearest 100,000	Number sold to nearest 10,000	Number sold to nearest 1,000
General Motors	2,463,971			
Hyundai and Kia	2,292,599			
Renault-Nissan- Mitsubishi-Alliance	2,992,471			
Toyota	3,115,343			
Volkswagen	3,296,440			

Task 5

Create a poster on a piece of card by sticking the pictures on the card in the order found in task 2.



Optional extension activity

Below shows a table of the top 5 selling car brands in the world and the country or city they originated from, with the average minimum and maximum temperature for that country. Can you work out the range in the average minimum and maximum temperature in degrees Celsius. Then answer the questions below.

Car Make	Country	Average minimum temperature (C ^o)	Average maximum temperature (C ^o)	Range
General Motors	Detroit, USA	-4	23	
Hyundai and Kia	South Korea	-2	26	
Renault	France	4	20	
Toyota	Japan	5	6	
Volkswagen	Germany	1	20	

1. Which country has the biggest range in temperature?

2. Order the car brands on average minimum temperature from lowest to highest?

3. What's the difference between the country with the lowest minimum average temperature and the country with the highest maximum average temperature?





Year 6 - Algebra Gem treasure hunt

You're to imagine you're an archaeologist working in a team who has found a note from a long time ago that states some valuable gems have been buried in a room somewhere under the old St Michael's church. The note contains algebra problems which when solved correctly tell you in which room the gems are buried. Will you get to the gems before anyone else?

Dear friend

I fear someone is planning to steal my precious gems, so I've buried them under one of the rooms of the church. If you can solve the puzzles below the gems are yours. There are 4 puzzles which involve solving algebra problems. When you solve the problems, you'll be given a room to cross off on the floor plan. The one that is not crossed off at the end is the room where the gems are buried.

Good luck!



Puzzle 1

Start at the top left-hand corner and work your way through the maze answering the questions. If you go through a room, the treasure is not buried in this room, cross this off on the floor plan. They're three rooms to cross off in total.





Puzzle 2

Find the missing terms in the following 4 sequences below. Two numbers appear twice. Find the digit sum of these two numbers, which means adding together all the digits in your answer. If your new answer is not a one digit answer, then add the digits again and so on until you get a one digit number. Cross these two numbers off on the floor plan.



61 58 55

3.

48		69

4.

62			47
----	--	--	----

Puzzle 3

Calculate the value of a and b below. Then subtract b from a and cross off the room number on the floor plan.

a= b=	ab=15	a+b=8	a>b	
b=	a=	•••••		
	b=	•••••		





Puzzle 4

Solve the 2 algebra problems below. Each answer is the room number to be crossed off on the floor plan.

1. I have 2 sons James and Edward. The formula below can be used to calculate and compare their age:

J+7=E

Where J is James' age and E is Edward's age. How old is James when Edward is 11?

2. The formula below can be used to calculate how long to cook a chicken for:

20p+10

Where p is the number of pounds a chicken weighs.

I only have 1 hour 50 minutes to cook a chicken. What is the maximum weight of the chicken I can cook?

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Floor plan





Optional extension activity

Use the internet to research the history of Coventry. Then create a timeline of when each important event occurred. Below are some events you could include in your timeline.

- St Mary's cathedral was built
- The new cathedral was built
- Coventry City Football Club won the FA cup.

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Year 3 - Calculations War time secret agents

It's 1940 and you're working as a secret agent for the British. You've been informed that the Germans are planning to bomb Coventry. Your mission is to crack their message by solving 3 clues which will tell you the day, the month and the time the bombing is planned for. Can you crack the code before the Germans bomb Coventry?



Clue 1

Solve the following maths problems and use the code to determine the time the Germans will bomb Coventry.



Problem	Double 261	20×16	700-675	345+213	714÷7	7.3+5	600-42
Answer							
Letter							

Problem	5+6×2	3+6×4-2	10-3 ²	10×10+2
Answer				
Letter				

Problem	6×2+0.3	(5+4)×9	7×(9-3)	3+6÷3-2	9×12-6
Answer					
Letter					

What time will the Germans bomb Coventry?





Clue 2

Work out these 2 long multiplication questions. Then add each digit in the answer together to get a new answer. If the answer is above 12 then add them again. Then cross off your answers in the table on the next page.



For these two division questions take the remainder and cross it off in the table on the next page.



For these 2 division questions calculate the remainder as a fraction, make sure your answer is in its simplest form. Then add the numerator to the denominator to get your final answer. Cross your answers off in the table below.

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The answer which has not be crossed off is the number month the bombing will occur.



What month will the Germans bomb Coventry?

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Clue 3

Answer the 5 problems below. Look for the answer which appears twice this is the date in the month the bombing will occur.

1. 110 war time children were asked whether they preferred pear drops, lemon sherbets or cola cubes. Three times as many children preferred cola cubes to pear drops. 24 children preferred pear drops. How many choose lemon sherbets?





4. Circle the number which is **not** a common factor of 18?

6 4 9 3	3 2
---------	-----

5. Circle the number which is **not** a prime number?

2	11	3	7	14	13
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Optional extension activity

Use the internet to find out about the Morse code. Can you use Morse code to translate the message below?

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•• •••	•—	••• •





Year 6 - Fractions, decimals and percentages

Serving up a treat

It's a busy lunch time and you're working as a chef at the café at Coombe Abbey. There are some very hungry customers in the cafe who are looking forward to a tasty lunch. You need to complete the following tasks so that the customers get good quality food, get what they've ordered and pay the right price. Will the customers be happy after their lunch?



Task 1

At the bottom of this sheet are 2 pizza templates. On these draw 2 pizzas: one meat pizza and 1 vegetarian pizza. Then divide the meat pizza into 6 slices and vegetarian pizza into 8 slices.

Two families have ordered some slices of pizza. Cut out and stick the correct number of pizza slices of each type of pizza on the plates below.

1. The Jones family want 5 slices of meat pizza and 3 slices of vegetarian pizza. Complete the sum below putting your fraction as a mixed fraction in its simplest form. Then put the correct slices of pizza on the plate.

2. The Jones family are full and have left 1 slice of meat pizza uneaten. Complete the sum to show the fraction of a pizza eaten.



3. The Baker family want 1 slice of meat pizza and 3 slices of vegetarian pizza. Complete the sum below and put in it's simplest form. Then put the correct pizza slices on the plate.

.

$$\frac{1}{6} + \frac{3}{8} =$$



4. How much did the Jones and Baker family order altogether? Put your answer in its simplest form.

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Task 2

Some of the customers need help with their bill. Can you answer their questions?

The Patel family all order the spaghetti carbonara which costs £7.45 for each person. How much 1. does 6 portions of the spaghetti carbonara cost?

2. Amy and her 6 friends have just received a bill costing £60.00. They've decided to split it equally between all 7 of them. To 2 decimal places how much does each person owe?

.....

.....





Task 3

Some of the customers have called in to make take away orders. Can you solve the problems?

 Lucy wants to order some chocolate cake for a birthday party. She needs 18 pieces and she will give each person ¹/₈ of a cake. How many cakes does she need to buy?

Tony has ordered 431 sandwiches for a private function. 12 sandwiches fit onto a plate. How many plates are needed?



Task 4

The staff are entitled to free pizza for lunch. All pizzas are the same size. The manager wants to know who has eaten the most pizza this lunch time. The table below shows the fraction of a pizza each member of staff has eaten this lunch time.

1. Can you order the staff from who had the least amount of pizza to the most?

Member of staff	Fraction
Jane	1 1⁄6
Mylo	5⁄6
Hugo	2⁄3
Emily	1 ¹ /3
Yasmin	1⁄2

2. Can write as a decimal and percentage the amount of a pizza eaten by:

a.	Yasmin	• • • • •
b.	Hugo	



Pizza templates for task 1





Optional extension activity

The restaurant is part of a hotel which is surrounded by lots of countryside where there are many walks. Below is a table which has been partly filled in. Use the clues below to match the walk to the distance then complete the table. Once the table is complete round the distance of each walk to 1 decimal place.

- The distance for the woodland walk has a 6 in the thousandths place.
- The distance for the village walk is 2547 ÷ 1000.
- The distance for the trip to the summit walk is 0.6174 × 10.
- The distance for the meadow walk has a 9 in the tenths place.
- The distance for the lakeside walk has a 9 in the hundredths place.
- The distance for the walk around the grounds is 128.4 ÷ 100.

Walk	Distance in miles	Distance to 1 decimal place
	2.836	
	3.296	
Trip to the summit		
	4.967	
The village walk		
Walk around the grounds		



A further activity is to take one of the walks and draw a map of it. Label landmarks on the map and note the distance between each landmark, making sure the whole walk adds up to the correct distance.





Year 6 - Money Converting units

You're in the town centre with Mum. You start off in Coventry Building Society where you pay your savings into your account. Then you go to several shops where you'll solve measurement problems. Work together to solve the problems. Can you purchase the correct quantities of all the items your Mum needs?

1. You've been collecting 5p coins to pay into your savings account with Coventry Building Society. You've worked out that you've £3.40 in 5p coins. You know that a 5p weighs 5.65g. The lady weighs the money to see how much you have and it weighs 384.2g. Did you work out how much you had correctly? Show your workings.



- 2. You and Mum go to the travel agent to book a holiday rental. Dad is only willing to go somewhere within 200 miles of Coventry.
- a. The lady suggests 5 places and tells you how far away they are but some are in miles and the rest are in kilometres. Can you compete the table below?

Town/City	Miles away	Km away
Bristol		160
Edinburgh	300	
Great Yarmouth		240
Newquay	250	
York	150	

b. Which places can you go to?

- 3. Then you both go to the fabric shop.
- a. First, Mum wants to buy some material to make a denim dress which has a width of 1 foot
 4 inches and a length of 3 feet 2 inches long. The shop keeper sells material in metres. Can you covert these measurements into metres.

	1ft 4 inches	
< 3ft 2 inches		······································

b. Your Mum also needs 68cm of ribbon. Can you tell the shop keeper what you want in millimeters?



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c. Finally, your Mum wants some lace which is sold in lengths of 50cm. She wants 2.60 metres of lace. How many pieces of lace does your Mum need to buy?



4a. Next, you both go to the fruit and vegetable shop to buy 4 different types of fruit and vegetables. You weigh them on the scales. Can you read what they weigh in kilograms and grams and enter them on the table below.



Fruit or vegetable	Kilograms	Grams
Bananas		
Carrots		
Melon		
Butternut squash		



b.	You need 1.2kg of carrots for dinner tonight. If each carrot weighs the same, how many more carrots do you need?
5.	Your Mum needs to post 16 parcels weighing 386g each. How much will all 16 parcels weigh in kilograms?
6.	The last shop is the supermarket.
a.	First your Dad wants ½ stone of charcoal for the barbeque. The supermarket sells bags in pounds. How many pounds do you need?



b. You and your Mum want to bake 24 cakes. The recipe to make 12 cakes is:

Ingredients (quantity for 12 cakes) Your Mum says she currently has the following: • No eggs 1/2 pound of flour • Flour 6oz 3/4 pound of butter • Sugar 6oz 1/4 pound of sugar Can you work out how much you need of each ingredient in ounces?

c. You need to buy 6 litres of cola. A 2 litre bottle costs £2.50. There is currently an offer on where you can buy three 500ml bottles for £2.00. Is it cheaper to buy 2 litre bottles or the 500ml bottles?



7. You arrived at Coventry at 10.05am. You finished shopping at 11.40am. How long were you shopping for in hours and minutes?

8. You and your Mum now need to go to Birmingham International train station. Look at the train timetable below.

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Train 3 runs 25 minutes after train 1 and takes the same amount of time and stops at all a. stations. Fill in the times in the table below.

Stops	Train 1	Train 2	Train 3
Coventry	11:49	12:02	
Canley	11:52		
Tile Hill	11:56		
Berkswell	11:59		
Hampton-in-Arden	12:03		
Birmingham International	12:06	12:11	

Train 2 is running 17 minutes late. How many minutes before train 3 is train 2 now due to get to b. **Birmingham International?**

.....



Optional extension activity

Your friend travels to Europe often. Reading the clues below, can you work out how many times she visited each city this year, how many miles away it's and the time it takes to fly there? Enter each city in the correct position in the table below.

- 1. Your friend has been to Madrid one more time than Paris
- 2. Your friend has travelled 4080 miles going to Berlin and back this year
- 3. It takes 100 minutes longer to fly to Moscow than Madrid
- 4. It's a further 50 miles to go to Madrid compared to Warsaw

City	Times visited this year	Miles away	Times takes to fly
	4	290	1hr 25mins
	5	1,060	2hr 25mins
	2	1,800	4hr 5mins
	4	1,010	3hr
	3	680	2hr 5mins





Year 6 - Perimeter, area and volume

	Quiz sheet					
	Room	Standard room	Deluxe room	Luxurious room	Superior room	Correct?
1	Which two have the same perimeter?					
1	What is the perimeter?					
2	Which two have the same area?					
2	What is the area?					

	Guess the largest area?		Calculate the area		Correct?
3	East car park	West car park	East car park	West car park	
4	Frank Whittle	Lady Godiva	Frank Whittle	Lady Godiva	
5	Sunshine cafe	Moonlight restaurant	Sunshine cafe	Moonlight restaurant	



Perimeter, area and volume

	Guess the largest volume?		Calculate the volume		Correct?
6	Home team	Away team	Home team	Away team	
7	Business cards	White board pens	Business cards	White board pens	
8	Warwickshire spa	Coventry spa	Warwickshire spa	Coventry spa	

Optional extension activity

The Wasps play at Coventry Building Society Arena. The pitch size is 105m by 6m, a total area of 7140m².

- 1. Investigate the size of other famous rugby stadiums, for example Twickenham. Are they the same size?
- 2. Investigate the size of other famous sports stadiums, e.g. Leicester City, Centre Court at Wimbledon. What's the size difference?



Year 4 - Ratios Rocky road cakes

You and your team have been given the ingredients to make eight rocky road cakes. However, your task is to make 10 rocky road cakes. You need to work out the how much is needed of each ingredient to make 10 cakes, then you'll follow the recipe to create them.



Ingredients to make 8 cakes	Ingredients to make 10 cakes
160g digestive biscuits	digestive biscuits
108g butter	butter
160g dark chocolate	dark chocolate
80g mini marshmallows	mini marshmallows
2 tablespoons of golden syrup	tablespoons of golden syrup

Method

- 1. Grease and line an 18cm square tin with baking parchment.
- 2. Place the digestive biscuits in a food bag and break them into small pieces, the size of 10p pieces.
- 3. Place the chocolate in a bowl and ask and adult to melt it in the microwave, leave to cool slightly. It should take around 2½ minutes to melt.
- 4. Making sure the bowl is not too hot, add the butter and golden syrup to the bowl of melted chocolate and stir until mixed in. Make sure the butter is cut into pieces and is at room temperature before adding it to the bowl.
- 5. Place the biscuits and marshmallows in the chocolate mixture and mix until covered.
- 6. Spread the mixture in the baking tin and put in the fridge for 2 hours.
- 7. Take out of the fridge and ask and adult to cut into 10 rectangular shaped pieces.



Ratios

Optional extension activity

Jane is making 4 mocktails for a party. She goes to the supermarket and decides to make 4 mocktails from the following drinks below:



The information below shows the ratios of ingredients for each mocktail. You're given the total amount to make for each mocktail. Can you work out how much is need of each ingredient?

Fizzy cherry bomb

Made using cherryade and lemonade in the ratio of 3:2. Jane makes 3 litres. How much does she need of each ingredient?

Tropical punch

Made using pineapple juice and orange juice in the ratio of 1:4. Jane makes 4 litres. How much does she need of each ingredient?

Fizzy cherry bomb - 3 litres

..... cherryade

..... lemonade

.....

Tropical punch - 4 litres

..... pineapple juice

..... orange juice

Autumn fizz

Made using apple juice, cherryade and lemonade in the ratio of 3:2:1. Jane makes 2,400ml. How much does she need of each ingredient?

Autumn fizz - 2,400ml

- apple juice
- cherryade
- lemonade

Tropical fizz

Made using pineapple juice, orange juice and lemonade in the ratio of 2:1:4. Jane makes 3,500ml. How much does she need of each ingredient?

Tropical fizz - 3,500ml

- pineapple juice
- orange juice
- lemonade





Ratios

Year 6 - Statistics Breaking news

It's the end of the 2020 season and you're a roving news reporter with The Coventry Evening Telegraph. Your task is to investigate Coventry City Football Club's current performance and performance over the last few seasons and create a news report about your findings.



Task 1

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The table below shows the number of points Coventry City Football Club scored in the last 8 seasons. Use this data to complete the line graph on the news report template then answer the questions below.

Season	Points
2012-2013	56
2013-2014	58
2014-2015	52
2015-2016	54
2016-2017	40
2017-2018	70
2018-2019	62
2019-2020	66

1. Between which years have they scored more than 60 points?

2. Between which two years was there the greatest difference in points scored?

Statistics

3. Calculate the mean number of points scored in a season for the last 3 seasons.

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Task 2

The table below shows the number of games played, the result and whether the match was played at home or away. On the second page of the news report template is a pie chart frame. Use this frame to create a pie chart for the number of games played, the result and whether the match was played at home or away. Make sure you give your chart a title and create a key. Then answer the following questions.

Result	Number
Home wins	12
Away wins	6
Home draws	3
Away draws	9
Home loss	3
Away loss	3

1.	How many matches were played?
2.	What percentage of matches were wins?
3.	What fraction of home matches did they lose?
••••	

Task 3

Complete the newspaper report by creating a headline and use the answers to questions answered in tasks 1 and 2 to create a short summary of Coventry City Football Club's performance.



Statistics

The Coventry Evening Telegraph

All about Coventry since 1884



The Coventry Evening Telegraph

All about Coventry since 1884



Optional extension activity

The table below show the goals scored, goals conceded and the goal difference at the end of the season for some other teams in the league. Fill in the missing information and then answer the problems below.

Team	Goals scored	Goals conceded	Goal difference
Gillingham	46	44	
Ipswich Town	50		0
Bristol Rovers		45	-1
Blackpool	43		-4
Shrewsbury Town	40	46	

1. Which is the only team in the table to have scored more goals then conceded goals?

2.	What is the difference in goal difference between Gillingham and Shrewsbury Town?	
3.	Doncaster Rovers goal difference was 5 higher than Bristol Rovers. What is Doncaster Rovers goal difference?	



Year 6 - Properties of shapes Holiday shapes

Draw the net of a triangular prism and cuboid and decorate them so they look like a tent and suitcase respectively. Then cut them out and make these up so they look like a tent and suitcase. Then write a description of the properties of both these shapes below.

See below for example of how the suitcase and tent could look.





Shapes sheet





Properties of shapes

Shapes sheet





Optional extension activity

Can you solve the clues to the crossword below? The clues relate to what you learnt in the property of shapes unit.



Across

- 3. This quadrilateral has more than one right angle.
- 5. A shape that is not a polygon.
- 7. If the radius of this circle is 4, what is the diameter?
- 8. The perimeter of a circle is called this.
- 10. The 3 angles of an equilateral triangle are equal to this number of degrees.

Down

- 1. A 10-sided shape is called this.
- 2. A quadrilateral with no right-angles.
- 4. You use this to measure angles.
- 6. The length of the line which goes through the centre of a circle is called this.
- 9. A polygon is called this when all sides and angles are equal.



Year 6 - Position and direction



The search for Lady Godiva worksheet

Task 1

Finding your location on the map.

Letter	Coordinates	Place
А		
В		
С		
D		
E		
F		



Position and direction

Task 2

Your friend's location

1. Reflect this square on the x-axis.



2. Reflect this parallelogram on the y-axis.





3. Reflect this triangle on the y-axis.



4. Reflect this rectangle on the x-axis.





Position and direction

Task 3

Your journey to Coventry Building Society.

1. Translate this shape so point A moves to point B. Draw the shape on the grid and describe the translation in the table.



2. Translate this shape so point A moves to point B. Draw the shape on the grid and describe the translation in the table.





3. Translate this shape so point A moves to point B. Draw the shape on the grid and describe the translation in the table.



Shape to translation	Translation
Shape 1	
Shape 2	
Shape 3	

Task 4

Direct your friend to Coventry Building Society.

Describe the translation of friend's location to the building society?

Task 5

Travel to Lady Godiva statue.

The coordinates for the Lady Godiva statue are



Position and direction

Optional extension activity

Draw your own map. This could be around the school or near where you live. Plot points of interest and write down the coordinates.

Then create a route on your map going through the points of interest and describe the translations between each point on you route.

An example could be a map of your local area including your house and different trees and a lake. You could then plot a route starting at your house, then you go to the large oak tree, then the lake, then the playground and back to you house.





Position and direction



Kindness changes lives

We're passionate about making a real difference to the lives of young people in and around Coventry. That's why we work with local schools to help support children's education.

All together, better