



W.C. 20th April

<https://www.bbc.co.uk/bitesize/tags/zncsscw/year-6-lessons/1>

Maths

After watching the videos and having a go at the practice activities, have a go at these activities. Depending on your confidence choose Mild, Medium or Spicy.

Extensions – You may wish to deepen your learning by looking at the Worksheets provided by the BBC too.



Monday

Learn to compare, order and round any number. Including rounding numbers to the nearest 10, 100 and 1,000.

<https://www.bbc.co.uk/bitesize/articles/zrjx6v4>

Negative numbers on a number line

It is not always necessary to give the exact number. For example, if there were **54,785** people living in a town, you could say that its population was approximately **55,000**.

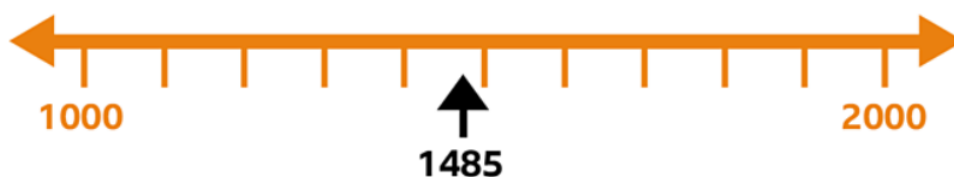
By doing this we have rounded **54,785** to the nearest thousand to give **55,000**.

Let's take a look at another example.

Rounding to the nearest 1,000

To round a number to the nearest 1000, look at the hundreds digit. If the hundreds digit is 5 or more, round up. If the hundreds digit is 4 or less, round down.

So, what is **1,485** to the nearest 1,000?



1,485 rounded to the nearest thousand is **1,000**.

Rounding to the nearest 100

To round a number to the nearest 100, look at the tens digit. If the tens digit is 5 or more, round up. If the tens digit is 4 or less, round down.

So, what is **1,485** to the nearest 100?

1485 is between **1,400** and **1,500**, but it is closer to **1,500**.



Rounding to the nearest 10

To round a number to the nearest 10, look at the ones digit. If the ones digit is 5 or more, round up. If the ones digit is 4 or less, round down.

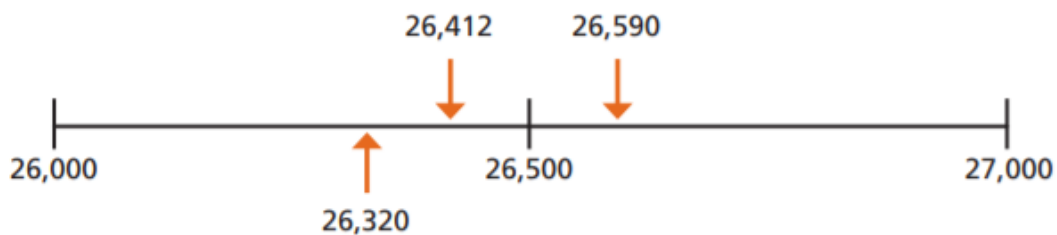
For example:

1,485 lies between **1,480** and **1,490**, but it is closer to **1,490**, so round up.

1,485 rounded to the nearest ten is **1,490**

Mild

- 1 Are these numbers closer to 26,000 or 27,000?



- a) 26,320 b) 26,412 c) 26,590

- 2 Round these numbers to the nearest 1,000

- a) 17,801 b) 42,370 c) 34,099

Medium

Complete the table.

Rounded to the nearest	147,283	68,547	1,656,908	900,571
10				
100				
1,000				
10,000				
100,000				

Circle all the numbers that round to 38,000 to the nearest 1,000

38,350

38,499

37,500

38,500

37,690

37,099

37,999

38,098

Spicy

- a) Write the missing digits so that each number rounds to three hundred and twenty thousand when rounded to the nearest ten thousand.

32_ ,657

3_5,001

31_ ,999

- b) How many different digits can you find for each missing digit?

Three children have rounded 471,958 to the nearest 100,000



Eva

500,000



Jack

400,000



Rosie

472,000

Who is correct?

Explain the mistake the other children have made.

A and B are integers.

A = 300,000 to the nearest 100,000

B = 300,000 to the nearest 10,000

- a) What is the greatest possible value of $A + B$?
- b) What is the smallest possible value of $A + B$?
- c) What is the greatest possible value of $A - B$?

Tuesday

Round decimals to the nearest whole number

<https://www.bbc.co.uk/bitesize/articles/z6g8d6f>

Decimals

A **decimal** is a way of writing a number that is not whole.

We place digits to the left or right of the decimal point depending on their value. On the left we have the **tens** and **ones** and on the right we have the **tenths** and **hundredths**.

Let's have a look at the number **41.32**.

Tens	Ones	.	Tenths	Hundredths
4	1	.	3	2

Rounding money or decimals

Rounding a price to the nearest pound is the same as rounding a decimal to the closest whole number.

Look at the digit in the tenths place. That's the digit after the decimal point:

- if it is 5 or more, then round it up
- if it is less than 5, then round down

So if the amount of pennies after the decimal point is more than 50p we round up, if it is less than 50p we round down.

For example, **£2.80** rounded to the nearest whole number is **£3**, because the digit in the tenths position is **8**.

Learn about the 'point' of decimals when weighing your holiday luggage. How important are tenths and hundredths?

Mild

1) Round these to the nearest whole number:

- | | |
|---------|---------|
| a) 7.7 | d) 78.4 |
| b) 0.6 | e) 3.5 |
| c) 10.9 | f) 63.1 |

2) For each of the following numbers, write 2 decimals that would round to this number when rounding to the nearest whole number:

- | | | | | |
|------|-------|-------|-------|------|
| a) 6 | b) 81 | c) 12 | d) 23 | e) 9 |
|------|-------|-------|-------|------|

3) Circle which numbers could be rounded to the following:

- | | | | | | |
|---------|------|-----|------|------|------|
| a) 98 - | 98.7 | 80 | 97.9 | 97.5 | 98.4 |
| b) 6 - | 6.6 | 6.5 | 6.2 | 5.6 | 5.9 |

Medium

Circle which numbers could be rounded to the following:

a) 98 - 98.7 80 97.9 97.5 98.4

b) 6 - 6.6 6.5 6.2 5.6 5.9

Round these to the nearest whole number:

a) 3.55 d) 57.57

b) 3.49 e) 39.61

c) 7.82 f) 354.76

Circle which numbers could be rounded to the following:

a) 43 - 43.78 43.12 43.11 43.3 42.93

b) 12 - 12.13 11.51 11.49 12.51 12.65

c) 685 - 685.99 685.49 684.89 684.12 685.13

Spicy

Round these to the nearest whole number:

a) 8.378 d) 192.435

b) 92.271 e) 4902.555

c) 392.555 f) 2020.671

Use the clues to find the correct answer from the eight possibilities.

CHALLENGE A

- I am less than 10.
- I am 10 rounded to the nearest whole.
- My tenths digit is odd.
- I have no hundredths digit.

Who am I?

7.83	10.3	8.7	9.51
10.27	9.9	9.83	10.12

CHALLENGE B

- I am larger than 6.
- To the nearest whole, I round down not up.
- My ones digit is odd, but my tenths digit is even.

Who am I?

5.28	9.84	8.37	7.85
7.24	8.6	9.7	6.8

CHALLENGE 2

Use the clues to find the correct answer from the eight possibilities.

CHALLENGE A

- I am between 10 and 20.
- I am 15 rounded to the nearest whole.
- I have 4 digits.
- My ones digit is even.

Who am I?

12.7	15.24	16.6	13.58
14.57	16.08	14.9	15.48

CHALLENGE B

- I have 3 digits.
- I am less than half of 16.
- When rounded to the nearest whole, I round down not up.
- All my digits are odd.

Who am I?

9.35	3.28	1.39	1.55
6.3	1.74	4.71	7.1

Wednesday

Negative numbers

Understand the position of negative numbers on a number line, as well as some contexts in which they are used (for example temperatures or money).

<https://www.bbc.co.uk/bitesize/articles/zjbk8xs>

What are positive and negative numbers?

Any number above zero is a **positive** number. Positive numbers are written with no sign or a **+** sign in front of them. They are counted up from zero to the right on a number line.

Any number below zero is a **negative** number. Negative numbers are always written with a **-** sign in front of them. They are counted down from zero to the left on a number line.



Always look at the sign in front of a number to see if it is positive or negative.

Zero, **0**, is neither positive nor negative.

Adding and subtracting positive and negative numbers

To add and subtract numbers always begin counting from zero.

When **adding** positive numbers, count to the **right**.

When **subtracting** positive numbers, count to the **left**.

Adding with negative numbers

Example:

What is **-4 + 5**?

To add **-4** and **5**, draw the starting number on a number line and count to the **right** when **adding** numbers.

So, **-4 + 5 = 1**



Subtracting with negative numbers

Example:

What is $-2 - 2$?

To subtract 2 from -2, start at -2 on a number line, then count to the **left** when **subtracting** numbers.



Mild

Complete the number line.



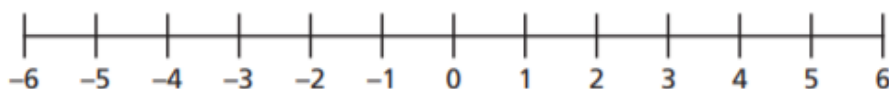
The table shows the temperatures in four cities in the world.

Leeds	Barcelona	Chicago	Sydney
-5°C	7°C	-8°C	16°C

- How many degrees colder is it in Barcelona than Sydney?
- How many degrees warmer is it in Leeds than Chicago?
- How many degrees colder is it in Leeds than Sydney?
- What is the difference between the temperature in Barcelona and Chicago?
- The temperature in Leeds increases by 4°C .
What is the new temperature?
- The temperature in Chicago decreases by 3°C .
What is the new temperature?

Medium

Complete the sentences. Use the number line to help you.



- | | |
|---|---|
| a) 5 more than -3 is <input type="text"/> | c) 4 more than -4 is <input type="text"/> |
| b) 4 less than 1 is <input type="text"/> | d) 3 less than -1 is <input type="text"/> |

A ship sits in the sea.

The base of the ship is 5 m below sea level.

The top of the ship is 11 m above sea level.

How tall is the ship?

Complete the number sentences.

a) $-3 + 5 =$

e) $3 - 5 =$

b) $1 - 4 =$

f) $-1 - 4 =$

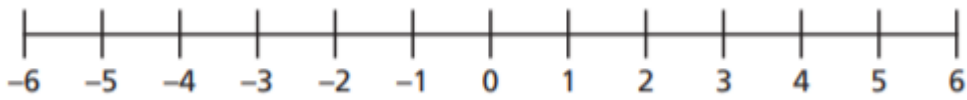
c) $-4 + 4 =$

g) $-4 - 4 =$

d) $-1 - 3 =$

h) $-1 + 3 =$

Spicy



Complete the number sentences.

a) $-3 + 5 =$

e) $3 - 5 =$

b) $1 - 4 =$

f) $-1 - 4 =$

c) $-4 + 4 =$

g) $-4 - 4 =$

d) $-1 - 3 =$

h) $-1 + 3 =$

Dexter and Eva are playing a game.

They each choose 2 cards and add up their total points.

The winner is the person with the highest total.



Who has won the game and by how many points?

Work out the values of A and B.



Complete the calculations.

$$A + B = \boxed{}$$

$$A - B = \boxed{}$$

Thursday

Challenge Day!

<https://www.bbc.co.uk/bitesize/articles/zhvx6v4>

Challenge 1

Can you work out the values of each shape?

$$\star + \star = 20$$

$$\heartsuit - \star = 7$$

$$\heartsuit - \heartsuit = \triangle$$

Challenge 2

Tom has six 10p coins and three 5p coins. He buys an apple for 59p and two pencils.

He has no money left. How much does a pencil cost?



Challenge 3

Here are some digit cards.



Amir and Donna each make a three-digit number using all the cards.

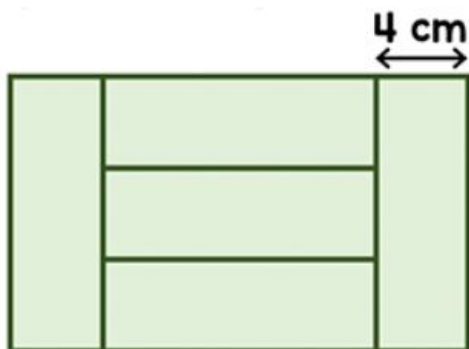
Amir notices that when he subtracts his number from Donna's number he gets an answer greater than 300 but less than 400.

What numbers did they make?

Challenge 4

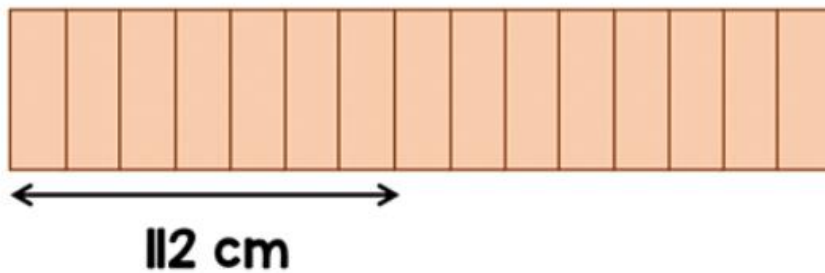
Five identical rectangles are put together to make a large rectangle.

The width of one rectangle is 4cm. Work out the perimeter of the large rectangle.



Challenge 5

15 identical blocks are lined up as shown.



The length of each individual block is twice the width.

If all 15 blocks are then laid end to end lengthways, what is the total length of the blocks altogether now?

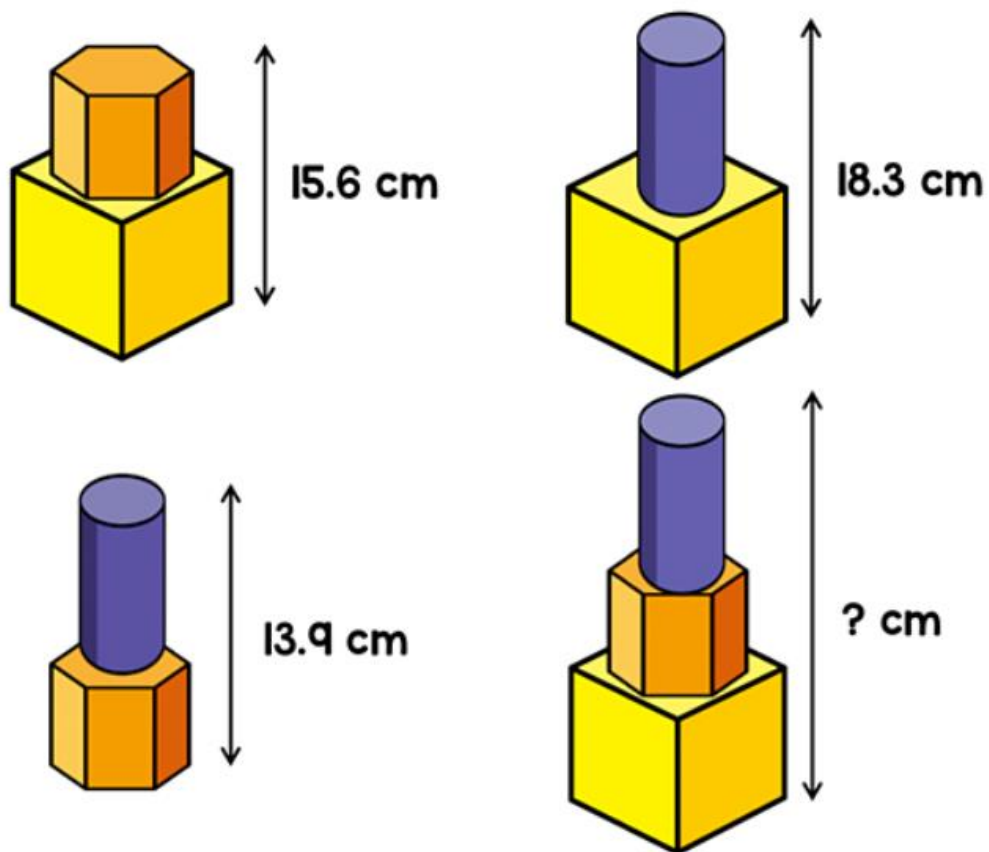


Challenge 6

Liam has these three shapes.



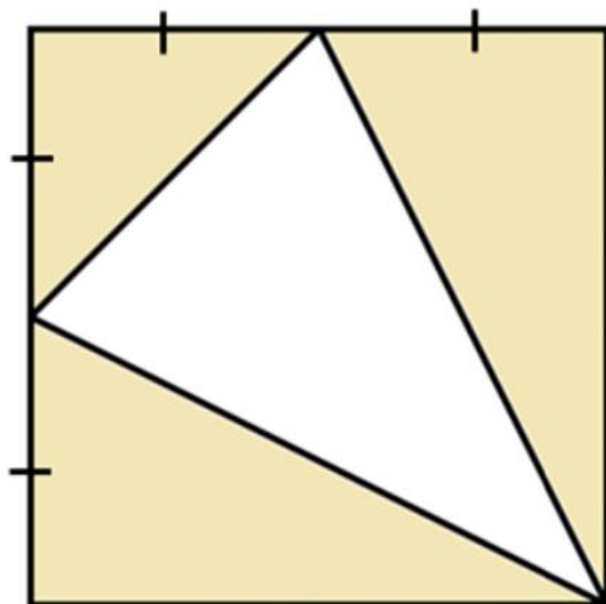
He uses them to make different towers. He measures the height of each tower he makes.



Liam stacks all three shapes to make one tall tower. How tall is the tower?

Challenge 7

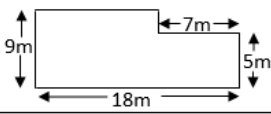
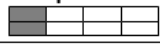
The diagram shows a square. The square has been divided into 4 triangles. What fraction of the square is shaded?



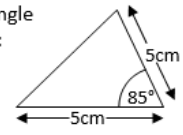
Friday

Key Skills

Mild

A: Place Value, Add and Subtract		B: Multiply, Divide and Fractions		C: Measure and Problem Solving	
1. What is the value of the 3 in this number? 2,934,765	5:1	11. Which is a common factor of 18 and 36? 3 4 5 8 10	5:8	21. Ben was 0.75 metres tall. Next time he got measured he had grown by $\frac{2}{10}$ of a metre. How tall is he now?	5:19
2. Write two hundred and twelve thousand, five hundred in digits.	5:1	12. Give two prime numbers between 10 and 20.	5:9		
3. Round 163,824 to the nearest thousand .	5:2	13. 3,472 ÷ 7	5:10	22. How many grams are there in 6.35 kilograms ?	5:20
4. What is the missing number? 2,465 2,365 2,165	5:2	14. 321.5 x 100	5:11		
5. What temperature is 12 degrees less than 2 degrees Celsius?	5:3	15. What is 4² ?	5:12	23. Calculate the perimeter of this field. 	5:21
6. What number is represented by these Roman Numerals? DLXXV	5:4	16. $\frac{2}{3} + \frac{2}{9} =$	5:13		
7. 10,750 – 2,925 =	5:5	17. Find an equivalent fraction of $\frac{2}{8}$. 	5:14	24. Use the glass to estimate the capacity of this jug. a. 250 ml. b. 300 ml. c. 750 ml. 	5:22
8. 6,495 + 8,912 =	5:5	18. Write $\frac{13}{5}$ as a mixed number .	5:15		
9. Complete this sum without written working. 7,800 + 2,500 =	5:6	19. $\frac{3}{4} \times 20 =$	5:16	25. Sarah starts watching a film at 10.15am . The film is 145 minutes long. What time does Sarah finish watching the film? <u>12.00pm</u>	5:23
10. I buy 2 CDs costing £5.90 each. How much change do I get from £15?	5:7	20. Round 4.51 to 1 decimal place.	5:17		
Total (A)		Total (B)		Total (C)	
Test Total (A+B+C)		R (0-9)	Y (10-19)	G (20-25)	

Medium and Spicy

A: Place Value, Add, Subtract, Multiply and Divide		B: Fractions, Ratio, Proportion and Algebra		C: Measure and Geometry	
1. Write five million, seventy one thousand, and eighty four in digits.	6:1	11. Which is the largest fraction? $\frac{1}{2}$ $\frac{3}{8}$ or $\frac{7}{16}$	6:7	21. How many kilometres are approximately equal to 10 miles ?	6:18
2. What is the value of the 5 in this number? 3,954,682	6:1	12. $\frac{2}{3} - \frac{4}{7} =$	6:8	22. Give two possible areas of a rectangle with a perimeter of 10cm.	6:20
3. Round 4.953 to 2 decimal places.	6:1	13. Simplify your answer. $\frac{5}{6} \times \frac{4}{9} =$	6:9	23. Write a formula to show how to find the area of a triangle.	6:21
4. Write the smallest possible crowd. Attendance: 8,200 (to the nearest hundred)	6:2	14. 57,389 ÷ 1000	6:10	24. Calculate the volume of a cube with a 6cm side length. 	6:22
5. 4,313 x 11	6:3	15. 9.42 x 4	6:11	25. Draw this triangle accurately below: Use a ruler and a protractor. 	6:23
6. 784 ÷ 16	6:3	16. Write this percentage as a fraction and a decimal . 45%	6:12		
7. Which is a common multiple of 12 and 15? 24 30 60 75 84	6:4	17. Find 40% of 360.	6:13		
8. Which factor of 49 is also a prime number ?	6:4	18. In a class of 35 pupils, $\frac{4}{7}$ are girls. How many boys are there?	6:14		
9. (12 - 9) x (9 + 7)	6:5	19. How much will a 7 minute call cost? Call charge: 25p + 9p per minute.	6:15		
10. I have £10. I buy 2 coffees at £1.73 each. How much do I have left?	6:6	20. What is the 10th term of this sequence? 2, 8, 14, 20, 26, ...	6:16		
Total (A)		Total (B)		Total (C)	
Test Total (A+B+C)		R (0-9)	Y (10-19)	G (20-25)	