



W.C. 15th June 2020

<https://www.bbc.co.uk/bitesize/tags/zhgppg8/year-5-and-p6-lessons/1>

Maths



Times Table Rock Star Battle- Mrs Shaughnessy has organised a “battle” between each class in our year group. The start date is today and the finishing date is next Sunday 21st June so the results will be published that week on twitter. Get battling and lets see who wins!!!

Use these worksheets to work from and not on. All you need is a piece of paper, pencil and maybe a ruler.

After watching the videos and having a go at the practise 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 Collins Worksheets provided by the BBC too.



Monday

<https://www.bbc.co.uk/bitesize/tags/zhgppg8/year-5-and-p6-lessons/1>

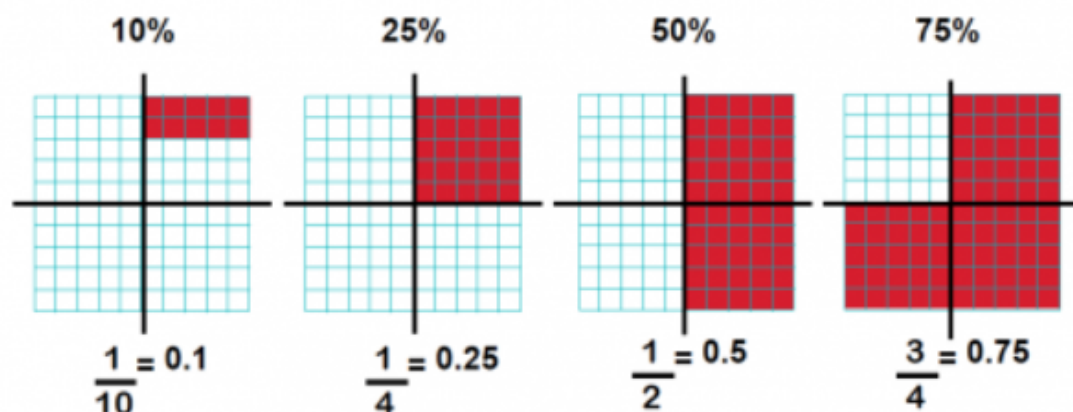
Understand percentages

Percentages are best understood in practical terms. For example:

If a park covers 5km² and 1km² is covered in grass, we know that $\frac{1}{5}$ of the park is covered in grass. If we convert this to a percentage, we say that 20% of the park is covered in grass, because $\frac{20}{100}$ is equivalent to $\frac{1}{5}$.

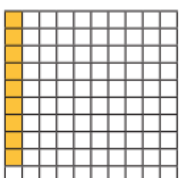
If there are 30 pupils in a class and 15 of them have packed lunches rather than school dinners, we can say that $\frac{1}{2}$ the class have packed lunches. If we convert this to a percentage, we say that 50% of the class have packed lunches, because $\frac{50}{100}$ is equivalent to $\frac{1}{2}$.

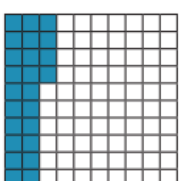
Children are introduced to **decimals** in Year 4 where they are taught to recognise the equivalence between decimal and fraction forms. They need to know that 0.5 is equivalent to $\frac{1}{2}$, 0.25 is equivalent to $\frac{1}{4}$, 0.01 is equivalent to $\frac{1}{100}$ and 0.1 is equivalent to $\frac{1}{10}$.

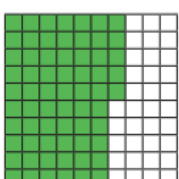


Mild

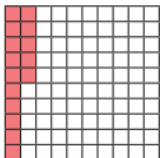
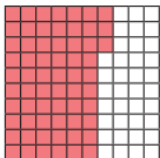
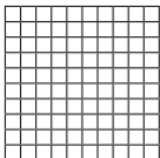
1 Complete the sentence for each diagram.

a)  There are parts out of a hundred shaded.
This is %.

b)  There are parts out of a hundred shaded.
This is %.

c)  There are parts out of a hundred shaded.
This is %.

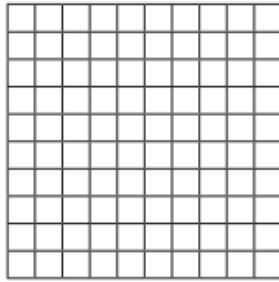
2 Complete the table.

Hundred square	Percentage
	
	
	82%

3

Shade 15% of the hundred square red.

Shade 32% of the hundred square blue.

What percentage of the hundred square is **not** shaded? %

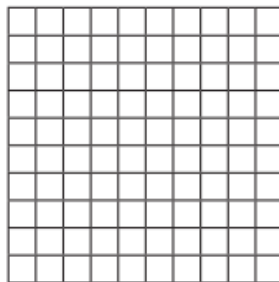
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Medium

3

Shade 15% of the hundred square red.

Shade 32% of the hundred square blue.

What percentage of the hundred square is **not** shaded? %

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- 4 a) Is 1% of this bar model shaded? _____



Explain your reasoning.

- b) What percentage of each bar model is shaded?



%



%

- 5 Passengers are boarding a plane.

The plane has 100 seats.

- a) 10% of the seats are already full.

How many passengers are already on the plane?

- b) 15% of the seats have not been booked.

How many seats have been booked?

- c) How many passengers still need to board the plane?

Spicy

- 5 Passengers are boarding a plane.

The plane has 100 seats.

- a) 10% of the seats are already full.

How many passengers are already on the plane?

- b) 15% of the seats have not been booked.

How many seats have been booked?

- c) How many passengers still need to board the plane?

- 6 Dexter has £1 to spend.
He buys some stickers.



I got 35p change.



What percentage of his money did Dexter spend?

%

- 7 Aisha and Brett have been selling tickets for the school play.

There are 100 seats available.

- On Monday they sold 34% of the tickets.
- On Tuesday they sold 42 tickets.
- By the end of Wednesday, 95% of the tickets had been sold.

How many tickets did they sell on Wednesday?

On Wednesday they sold tickets.

Tuesday

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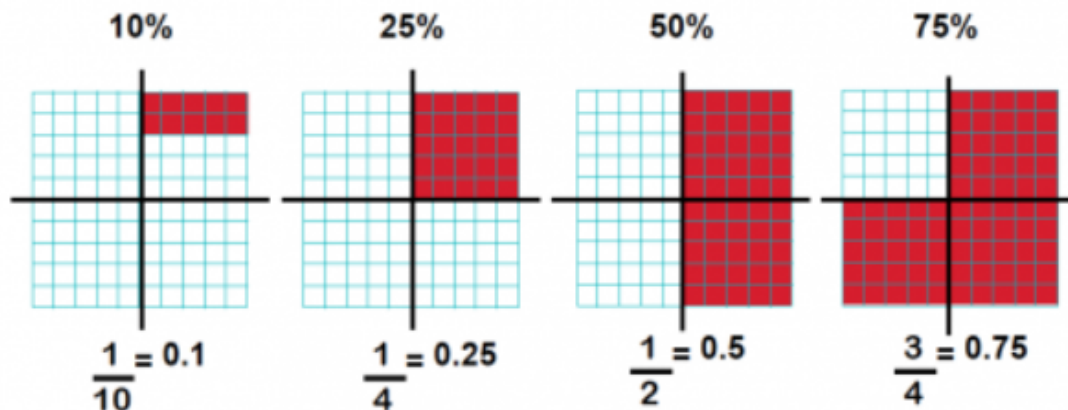
Percentages as fractions and decimals

Percentages are best understood in practical terms. For example:

If a park covers 5km² and 1km² is covered in grass, we know that $\frac{1}{5}$ of the park is covered in grass. If we convert this to a percentage, we say that 20% of the park is covered in grass, because $\frac{20}{100}$ is equivalent to $\frac{1}{5}$.

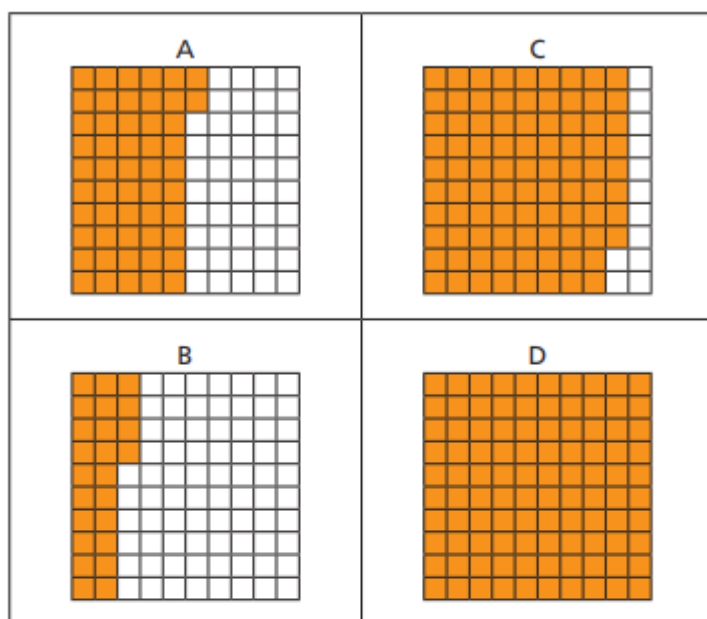
If there are 30 pupils in a class and 15 of them have packed lunches rather than school dinners, we can say that $\frac{1}{2}$ the class have packed lunches. If we convert this to a percentage, we say that 50% of the class have packed lunches, because $\frac{50}{100}$ is equivalent to $\frac{1}{2}$.

Children are introduced to **decimals** in Year 4 where they are taught to recognise the equivalence between decimal and fraction forms. They need to know that 0.5 is equivalent to $\frac{1}{2}$, 0.25 is equivalent to $\frac{1}{4}$, 0.01 is equivalent to $\frac{1}{100}$ and 0.1 is equivalent to $\frac{1}{10}$.



Mild

- 1 Here are four hundred squares.

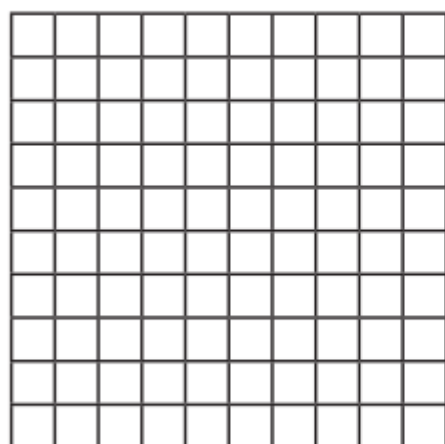


Complete the table.

Hundred square	Percentage	Fraction	Decimal
A		$\frac{52}{100}$	
B			
C			
D			

- 2 Prove that 0.2 is equal to 20%.

You may use the hundred square to help you.



Why do you think some people think that 0.2 is equal to 2%?

3 Complete the fraction, decimal and percentage equivalents.

a) $32\% = \frac{\boxed{}}{100} = \boxed{}$

$35\% = \frac{\boxed{}}{100} = \boxed{}$

$48\% = \frac{\boxed{}}{100} = \boxed{}$

c) $0.29 = \boxed{}\% = \frac{\boxed{}}{100}$

$0.71 = \boxed{}\% = \frac{\boxed{}}{100}$

$0.03 = \boxed{}\% = \frac{\boxed{}}{100}$

b) $\frac{17}{100} = \boxed{}\% = \boxed{}$

$\frac{9}{100} = \boxed{}\% = \boxed{}$

$\frac{90}{100} = \boxed{}\% = \boxed{}$

Medium

4 Write <, > or = to complete the statements.

a) 50% $\bigcirc$ $\frac{5}{100}$

d) $\frac{40}{100}$ $\bigcirc$ 40%

b) 25% $\bigcirc$ $\frac{50}{100}$

e) $\frac{70}{100}$ $\bigcirc$ 7%

c) 14% $\bigcirc$ $\frac{41}{100}$

f) 82% $\bigcirc$ $\frac{82}{100}$

5 Write the values in order from smallest to greatest.

a) 33% $\frac{30}{100}$ 3% $\frac{13}{100}$

b) 299% $\frac{91}{100}$ 9% $\frac{9}{10}$

c) 2.5 $\frac{25}{100}$ 250 25% of 100 $\frac{25}{1000}$

6

Convert the fractions to hundredths.

Complete the decimal and percentage equivalents.

$$\text{a) } \frac{150}{300} = \frac{\boxed{}}{100} = \boxed{} = \boxed{} \%$$

$$\text{b) } \frac{25}{500} = \frac{\boxed{}}{100} = \boxed{} = \boxed{} \%$$

$$\text{c) } \frac{48}{300} = \frac{\boxed{}}{100} = \boxed{} = \boxed{} \%$$

$$\text{d) } \frac{18}{50} = \frac{\boxed{}}{100} = \boxed{} = \boxed{} \%$$

$$\text{e) } \frac{13}{25} = \frac{\boxed{}}{100} = \boxed{} = \boxed{} \%$$

Spicy

6

Convert the fractions to hundredths.

Complete the decimal and percentage equivalents.

$$\text{a) } \frac{150}{300} = \frac{\boxed{}}{100} = \boxed{} = \boxed{} \%$$

$$\text{b) } \frac{25}{500} = \frac{\boxed{}}{100} = \boxed{} = \boxed{} \%$$

$$\text{c) } \frac{48}{300} = \frac{\boxed{}}{100} = \boxed{} = \boxed{} \%$$

$$\text{d) } \frac{18}{50} = \frac{\boxed{}}{100} = \boxed{} = \boxed{} \%$$

$$\text{e) } \frac{13}{25} = \frac{\boxed{}}{100} = \boxed{} = \boxed{} \%$$

7

Circle all the fractions that are greater than or equal to 50%.

$$\frac{10}{50}$$

$$\frac{4}{5}$$

$$\frac{50}{100}$$

$$\frac{30}{80}$$

$$\frac{1}{50}$$

$$\frac{70}{140}$$

8 Jack and Dora go shopping with the same amount of money.

Jack spends $\frac{1}{3}$ of his money.

Dora spends 30% of her money.

a) Who spends more money? _____

Use fraction and percentage equivalence to explain your answer.

b) Jack and Dora each started with £300

How much money do they each have left?

Jack

Dora

Wednesday

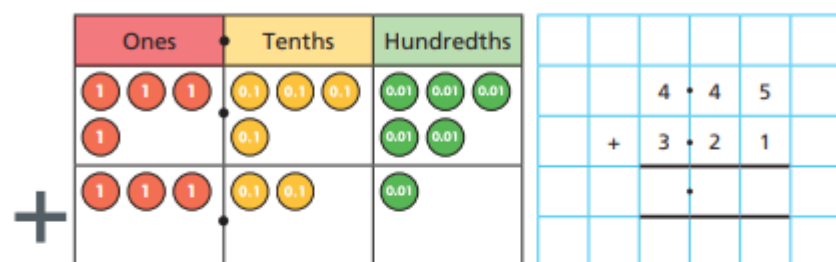
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Adding decimals with the same number of decimal places

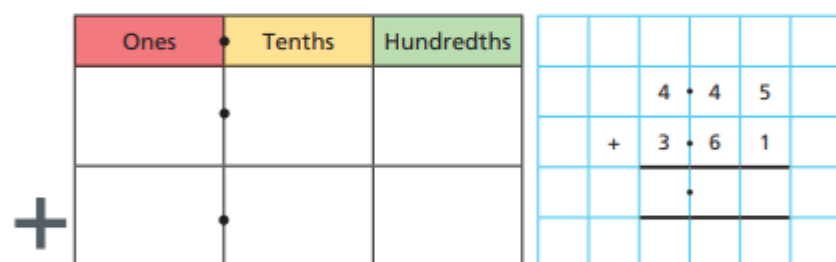
Mild

- 1 Complete the additions.
Use the place value charts to help you.

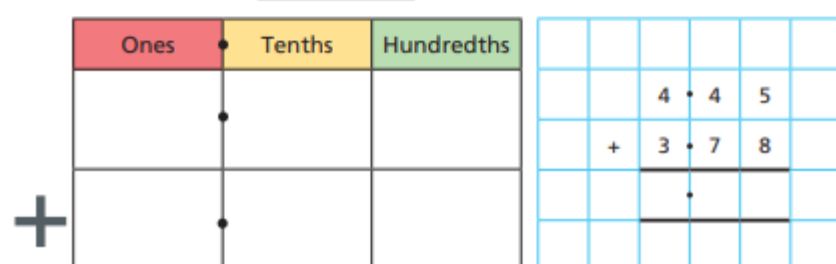
a) $4.45 + 3.21 =$



b) $4.45 + 3.61 =$



c) $4.45 + 3.78 =$



2 Use the column method to work out the additions.

a)

		5	•	3
	+	2	•	5

e)

		3	•	1	0	2
	+	5	•	8	7	6

b)

		6	•	0	3
	+	3	•	9	1

f)

		1	2	•	0	3
	+		9	•	2	2

c)

		2	•	3	2
	+	1	0	•	1

g)

		5	•	7	5
		5	•	3	2
	+	5	•	0	1

d)

		6	•	3	7
	+	6	•	2	6

h)

		1	4	•	9	9
	+	1	2	•	3	7

3 Work out the calculations.

Write <, > or = to make the statements correct.

a) $0.64 + 4.79$ $5.01 + 0.23$

b) $7.427 + 3.238$ $5.427 + 5.832$

c) $3.08 + 4.63$ $4.84 + 2.87$

Medium

3 Work out the calculations.

Write $<$, $>$ or $=$ to make the statements correct.

a) $0.64 + 4.79$ $5.01 + 0.23$

b) $7.427 + 3.238$ $5.427 + 5.832$

c) $3.08 + 4.63$ $4.84 + 2.87$

4 Teddy is working out the total cost of these items.



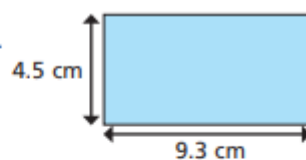
Here are his workings.

$$\begin{array}{r} 5 \cdot 7 \cdot 5 \\ + 1 \cdot 1 \cdot 2 \cdot 0 \\ \hline 6 \cdot 8 \cdot 7 \cdot 0 \end{array}$$

Talk to a partner about Teddy's mistake.

Work out the correct answer.

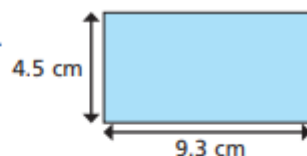
5 Work out the perimeter of the shape.



perimeter = cm

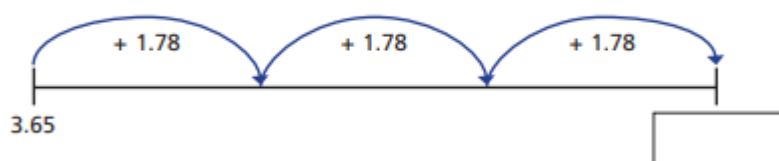
Spicy

- 5 Work out the perimeter of the shape.

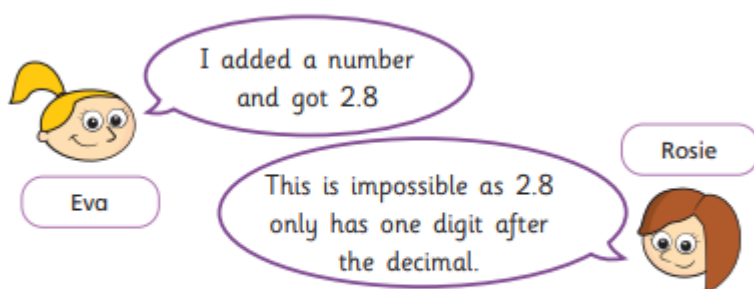


perimeter = cm

- 6 Complete the number line.



- 7 Eva starts with the number 1.62



Is Rosie correct? _____

Talk about it with a partner.

Thursday

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Adding decimals with different numbers of decimal places

Mild

1 Ron is adding 1.4 and 2.53

He makes each number with counters.

Ones	Tenths	Hundredths
		
		

a) What is the answer to Ron's calculation?

b) Explain your method to a partner.

c) Did you have to make an exchange? _____.

2 Work out the additions.

a)

		3	•	0	2
	+	1	•	6	
			•		

c)

		2	•	8	
	+	3	•	4	5
			•		

b)

		1	3	•	5
	+		0	•	2
				•	

d)

			6	•	1
	+	1	3	•	9
				•	

3

Filip is adding two numbers together.

He writes it as a column addition.

$$\begin{array}{r} 138 \\ + 195 \\ \hline 333 \\ \hline 11 \end{array}$$

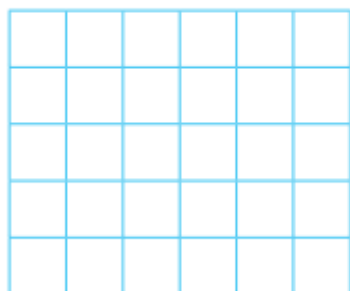
a) What mistake has Filip made?

b) Use the column method to work out the correct answer.

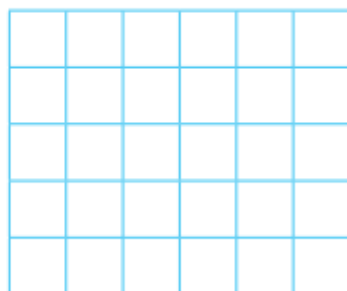
Medium

4 Use the column method to work out the additions.

a) $2.36 + 1.9$

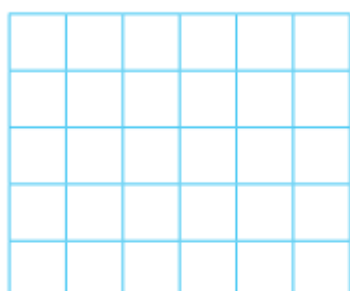


b) $14.82 + 3.7$

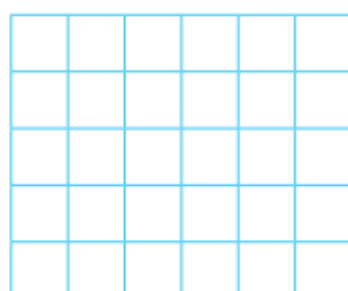


5 Use the column method to work out the additions.

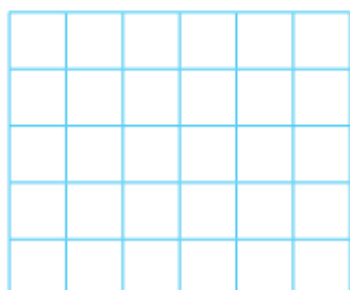
a) $0.59 + 11.9$



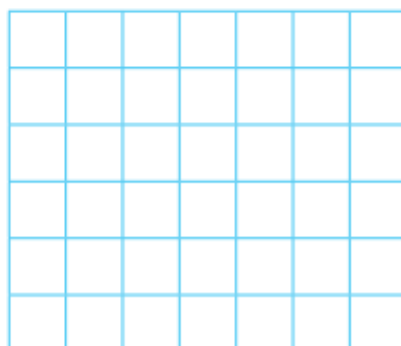
c) $0.591 + 1.73$



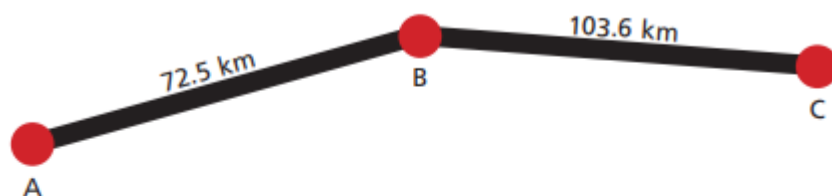
b) $77.34 + 1.82$



d) $3.2 + 1.84 + 0.931$



6 Mr Hall drives from point A to point B, then on to point C.



What is the total distance that Mr Hall drives?

km

Spicy

- 7 Here are four number cards.

3.8

4.19

0.72

11.46

- a) What is the greatest total you can make by adding two of the numbers?

Complete the calculation.

$$\boxed{} + \boxed{} = \boxed{}$$

- b) What is the sum of the four numbers?

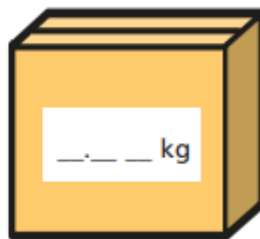
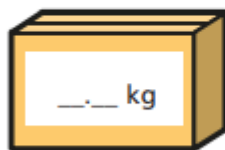
- 8 Work out the missing digits.

a) $__4.3 + 1__.37 = 39.67$

b) $4.8__ + __.__ = 12.65$

- 9 The total mass of the two boxes is 10.85 kg.

What could the mass of each box be?



How many answers can you find?

Now, challenge yourself and your friends in year 5 to a Times Tables Rockstars Battle!

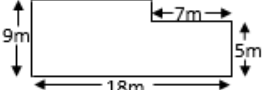
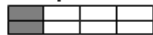


Friday

Today you may wish to challenge yourself with the online challenges or the Key Skills tasks! But make sure to have plenty of fun with maths today!

Key Skills

Mild, Medium and Spicy

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 <u>measured</u> 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. $3,472 \div 7$	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. 321.5×100	5:11		
5. What temperature is 12 degrees less than 2 degrees Celsius?	5:3	15. What is 4^2 ?	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?	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)	