

Year 5

Summer Term Week 8 (w/c 15th June)

Lesson 1

Understand percentages

<https://vimeo.com/428001381>

Lesson 2

Percentages as fractions and decimals

<https://vimeo.com/428001420>

Lesson 3

Adding decimals with the same number of decimal places

<https://vimeo.com/428001477>

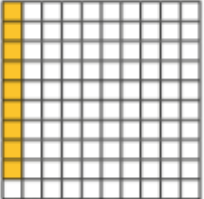
Lesson 4

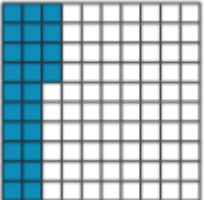
Adding decimals with a different number of decimal places

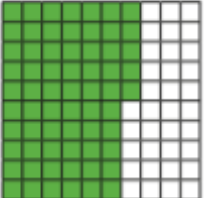
<https://vimeo.com/428001528>

Understand percentages

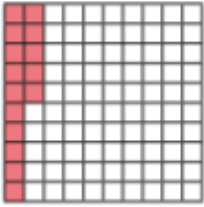
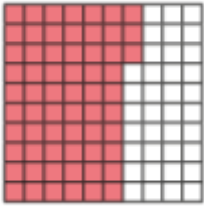
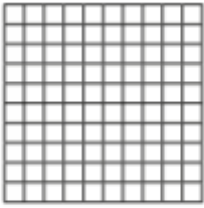
1 Complete the sentence for each diagram.

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

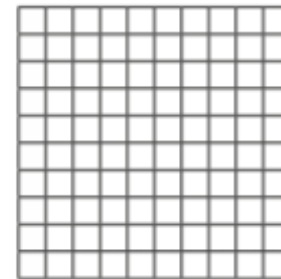
b)  There are parts out of a hundred shaded.
This is %.

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? %

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?

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.

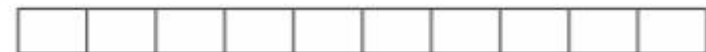
There are 100 seats available.

- 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.

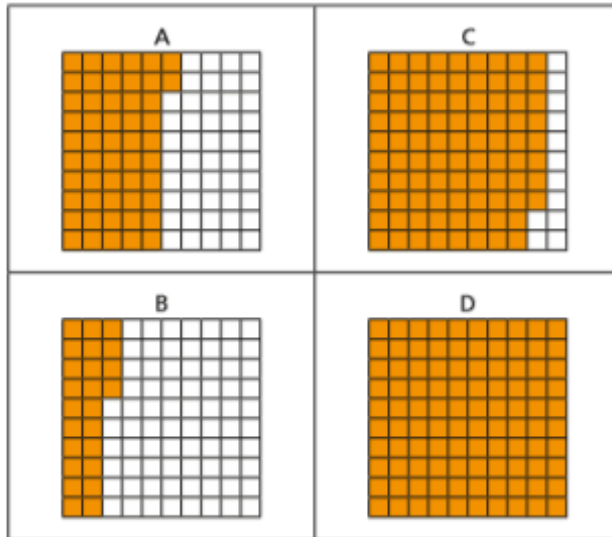
8 Shade 85% of this bar model.



Compare answers with a partner.

Percentages as fractions and decimals

1 Here are four hundred squares.

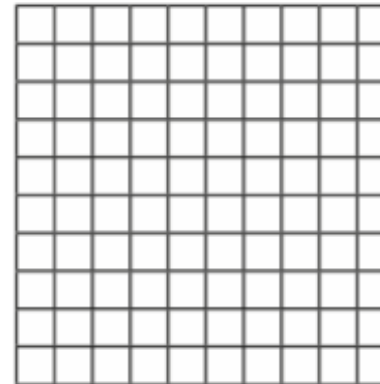


Complete the table.

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) $32\% = \frac{\square}{100} = \square$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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.

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

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

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

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

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

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

Adding decimals with the same number of decimal places

1 Complete the additions.

Use the place value charts to help you.

a) $4.45 + 3.21 =$

Ones	Tenths	Hundredths
1 1 1	0.1 0.1 0.1	0.01 0.01 0.01
1	0.1	0.01 0.01
1 1 1	0.1 0.1	0.01

	4	4	5
+	3	2	1
		.	

b) $4.45 + 3.61 =$

Ones	Tenths	Hundredths

	4	4	5
+	3	6	1
		.	

c) $4.45 + 3.78 =$

Ones	Tenths	Hundredths

	4	4	5
+	3	7	8
		.	

Which calculation was easier? Talk about it with a partner.



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	4
	+	9	2	2	7	
			.			

c)

		2	3	2	
	+	1	0	1	7
			.		

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) $3.08 + 4.63$ $4.84 + 2.87$

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



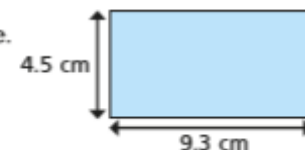
Here are his workings.

$$\begin{array}{r} 5.75 \\ + 11.20 \\ \hline 68.70 \end{array}$$

Talk to a partner about Teddy's mistake.

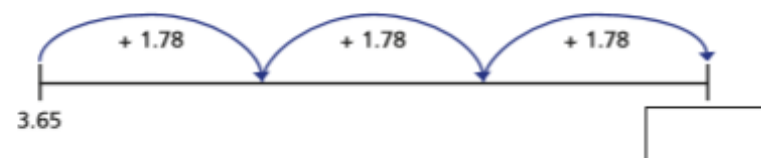
Work out the correct answer.

5 Work out the perimeter of the shape.



perimeter = cm

6 Complete the number line.



7 Eva starts with the number 1.62



I added a number and got 2.8

Eva

Rosie



This is impossible as 2.8 only has one digit after the decimal.

Is Rosie correct? _____

Talk about it with a partner.

Adding decimals with a different number of decimal places

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	
<hr/>				
		.		
<hr/>				

c)

		2	8	
	+	3	4	5
<hr/>				
		.		
<hr/>				

b)

		1	3	5	
	+		0	2	3
<hr/>					
		.			
<hr/>					

d)

			6	1	5
	+	1	3	9	
<hr/>					
		.			
<hr/>					

3 Filip is adding two numbers together.

He writes it as a column addition.

a) What mistake has Filip made?

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

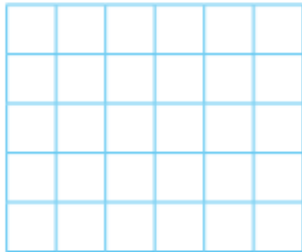
4 Use the column method to work out the additions.

a) $2.36 + 1.9$

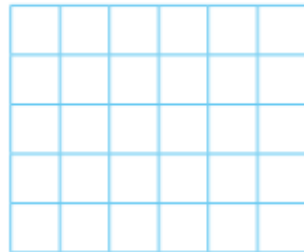
b) $14.82 + 3.7$

5 Use the column method to work out the additions.

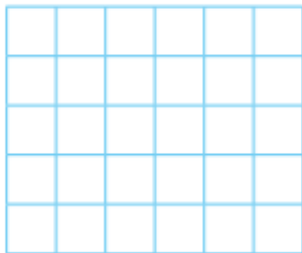
a) $0.59 + 11.9$



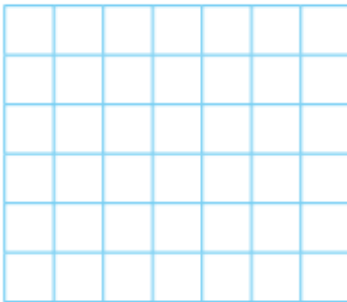
c) $0.591 + 1.73$



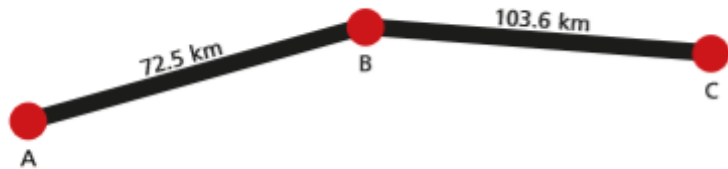
b) $77.34 + 1.82$



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

7 Here are four number cards.



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

Complete the calculation.

+ =

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?