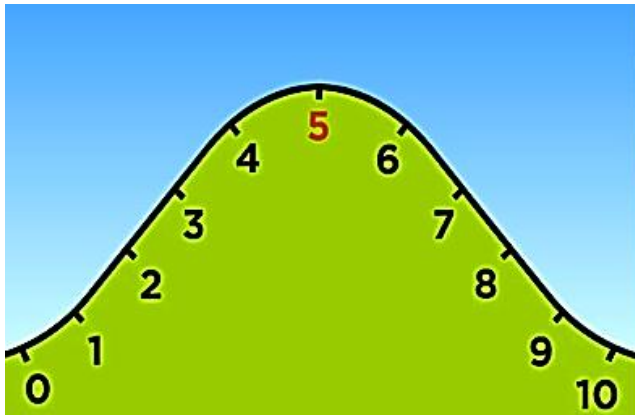


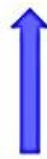
Maths: Monday

Today we will be learning how to round decimals to the nearest whole number and the nearest tenth. To start, let's refresh our knowledge of place value and rounding rules!

Rounding Rules

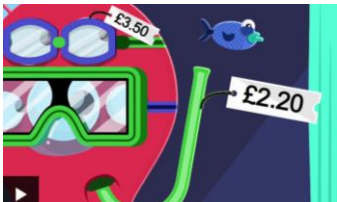


Rounding Numbers

5 or more, 
let it soar.

4 or less, 
let it rest.

- You remember if a number ends in 5 or more, you **round up**.
- If your number ends in 4 or less, you **round down**.
- Click on the LINK below to watch a video that will help you round decimals.
- <https://www.bbc.co.uk/bitesize/topics/zh8dmp3/articles/zsvt97h>



If you were to round **3.4** to the nearest whole number, you would round **DOWN to 3** because “4 or less, let it rest”

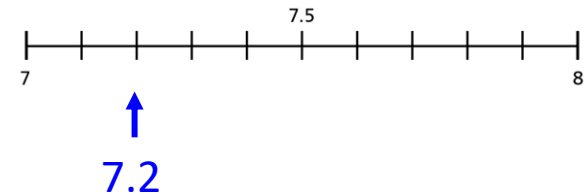
0	t	h
Ones	Tenths	Hundredths
1	0.1	0.01

Remember your place value; the first column after the decimal point is the tenths, so if you are rounding to the nearest tenth, you will have **one** number after the decimal point.

If you are rounding a decimal to the nearest **whole number**; you will not have a decimal point!

Examples

Using a number line, we can see how to round a decimal number to the nearest whole number. What is the nearest whole number to **7.2**?

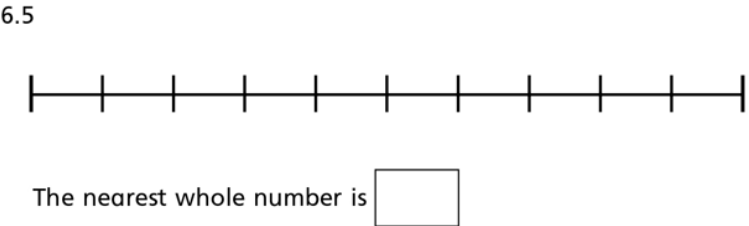
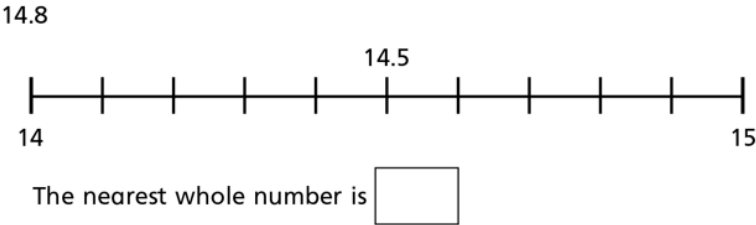


The number line is divided into tenths and we can see that 7.2 is much closer to 7 than 8. If we consider our rounding rules, then “4 or less, let it rest”. Therefore 7.2 rounds to 7, which is the nearest whole number.

Maths: Monday

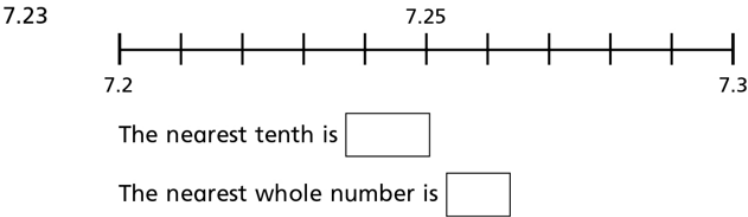
Let's Practise

Round **14.8** and **6.5** to the nearest whole number, using the number lines to help.



If you were asked to round **7.23** to the nearest **whole number** and the nearest **tenth**, how would you do that?

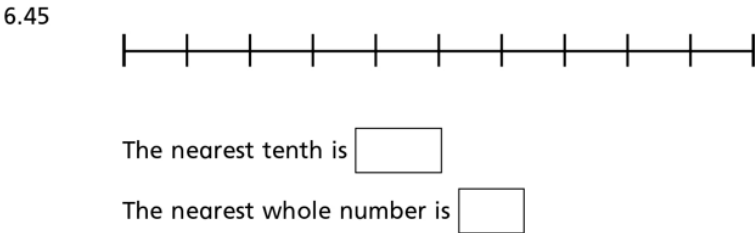
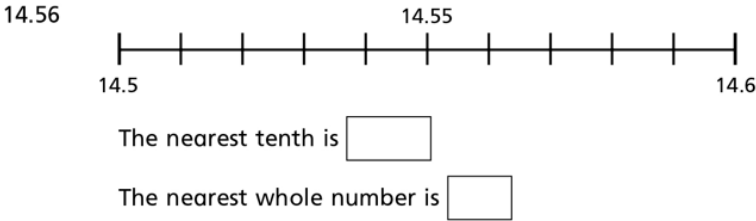
Remember that when rounding to the nearest **tenth**, there is **one** number after the decimal point.



7.23 ends in a 3 and we know that if the number is “4 or less, let it rest”. Therefore the nearest tenth is **7.2**. When rounding to the nearest whole number, we look at the **tenths column**. Because the number in the tenths column is a **2** our rules again tell us “4 or less, let it rest” so **7.23** rounded to the nearest whole number is **7**. The number line also clearly shows that **7.23** is much closer to the **7** than the whole number **8**.

Let's Practise

Round **14.56** and **6.45** to the nearest tenth and whole number, using the number lines to help.



Maths: Monday

Challenge 1:

Q1: Round the following numbers to the nearest whole number.

- a) 1.2
- b) 2.3
- c) 4.6
- d) 6.8
- e) 4.5

Q2: Use the number line to complete the stem sentence



4.26 falls between _____ and _____ but is closer to _____ on the number line.

4.26 rounded to the nearest whole number is _____.

Q3: Round the following numbers to the nearest tenth and whole number.

- a) 9.29
- b) 4.18
- c) 5.55

Tasks

Challenge 2:

Q1:

- a) When rounding to the nearest tenth, how many digits will there be after the decimal point?
- b) Round each number to one decimal place.

1.33		4.03	
1.34		4.04	
1.35		4.05	
1.36		4.06	
1.37		4.07	

Q2:

Write down each decimal that rounds to **6.2**

- a) 6.32
- b) 6.23
- c) 6.27
- d) 6.17
- e) 6.12
- f) 6.25

Explain your reasoning.

Challenge 3:

Q1:

Here are the weights in kilograms of some parcels.

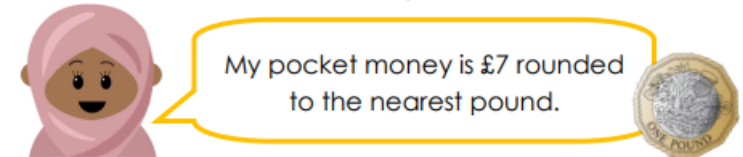


- a) Round the weight of each parcel to 1 decimal place.

kg kg kg kg

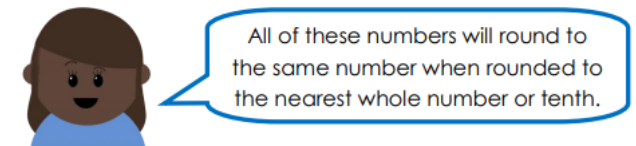
Q2:

Asha says...



What is the smallest and largest amount that her pocket money could be?

Q3: Anita has looked at the numbers below and says...



On which number has she made an error?
Explain how you know!

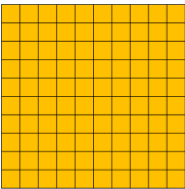
Maths: Tuesday

Today we will be learning about percentages. “Per cent” relates to “parts per hundred” and the symbol for this is %. You will learn how to use percentages and understand how they are represented.

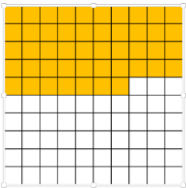
What are percentages?

When we say “percent” we are really saying “per 100”
If all of the hundred square is shaded, we can say one whole or **100%** is shaded.

100%



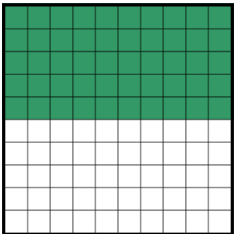
If 45 out of 100 parts are shaded,
then 45 percent (45%) is shaded.



45%

Look at the green shaded square below.

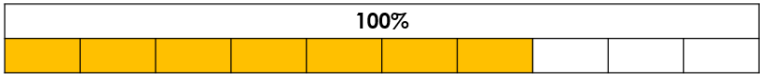
- There are ____ parts per hundred shaded.
- This is ____ %



Bar Models

We can represent percentages in different ways

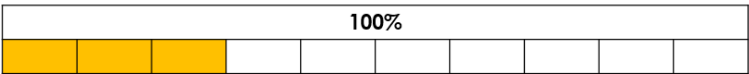
The bar = 100%



7 parts are shaded = 7 out of 10 parts.

$$\frac{7}{10} = \frac{70}{100}$$

7 out of 10 parts are shaded. 70 % is shaded.



__ parts are shaded = __ out of 10 parts.

$$\frac{?}{10} = \frac{?}{100}$$

__ out of 10 parts are shaded. __ % is shaded.

Let's Practise

Check how many parts are in the whole.
If there are 10 parts, then 1 part =10%.
If there are 100 parts in the whole, then 1 part = 1%.

Look at the bar models below. Count how many parts in the whole, then count how many parts are shaded. Is each part worth 1% or 10%?

What percentage of each bar model is shaded?



__ %

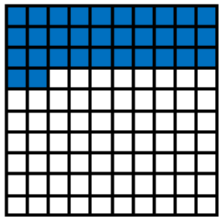


__ %

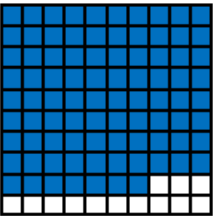
Maths: Tuesday

Fractions

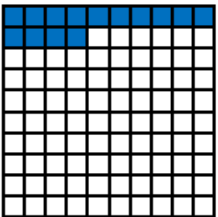
You also represent percentages as fractions.
For example:



32 squares out of 100 are shaded in this grid. As a fraction it would be $\frac{32}{100}$
As a percentage it would be **32%**



87 squares out of 100 are shaded in this grid. As a fraction it would be $\frac{87}{100}$
As a percentage it would be **87%**



14 squares out of 100 are shaded in this grid. As a fraction it would be $\frac{14}{100}$
As a percentage it would be **14%**

Let's Practise

Q1:
£1 = 100p

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

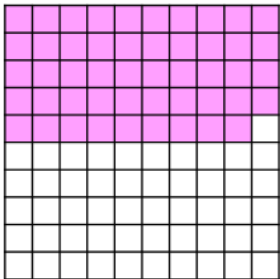


What percentage of his money did Dexter spend?

%

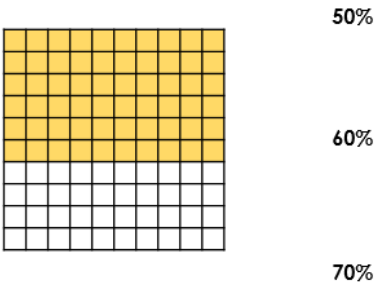
Q2: 2b. True or false?

The grid below represents 41%.



Q3:

Which percentage does this grid show?



Q4:

Which percentages match these fractions?

- a) $\frac{17}{100}$ b) $\frac{30}{100}$ c) $\frac{5}{10}$ d) $\frac{5}{100}$

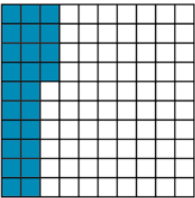
Maths: Tuesday

Tasks

Challenge 1:

1

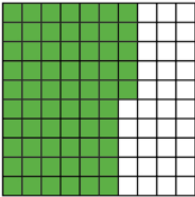
b)



There are parts out of a hundred shaded.

This is %.

c)

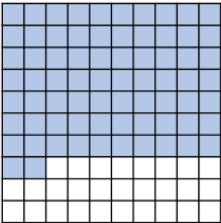


There are parts out of a hundred shaded.

This is %.

2a. True or false?

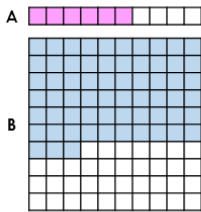
The grid below represents 70%.

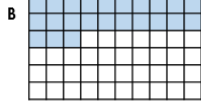




Challenge 2:

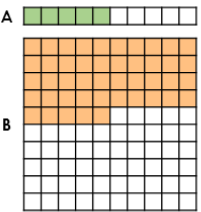
4a. Match the grids to their percentages.

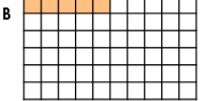
A  70%

B  60%

C  63%

4b. Match the grids to their percentages.

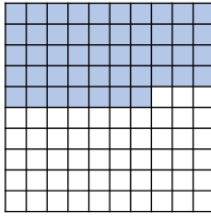
A  40%

B  50%

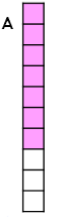
C  45%

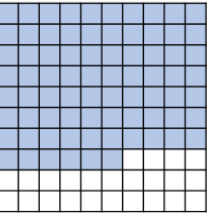
5a. Write the percentage represented by the grids below.

A 

B 

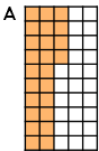
5b. Write the percentage represented by the grids below.

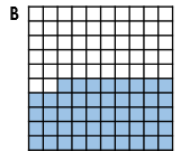
A 

B 

Challenge 3:

7a. Circle the odd one out.

A 

B 

C 

D 48%

Explain your reasoning.



8a. Put the cards in order from smallest to largest.

14 parts per 50

51%

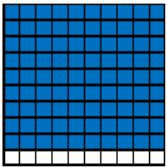
11 parts out of 20

27%

6 parts per 20

4 parts out of 10

Alfie thinks all of his diagrams represent 90%.
Is he correct?




6. On a grid of one hundred squares, how many squares are shaded if :

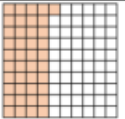
- (a) 30% is shaded?
- (b) 55% is shaded?
- (c) 97% is shaded?
- (d) 6% is shaded?
- (e) 1% is shaded?

Maths: Wednesday

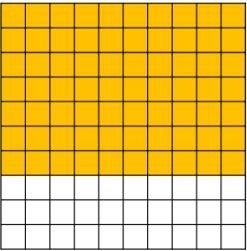
Today we will be learning how to represent percentages as both fractions and decimals. You know that “one hundredth” means “1 part out of 100”, it can be shown as a fraction (1/100), a decimal (0.01) and also a percentage (1%). They all mean the same thing but are represented in 3 different ways.

Examples

Look at the example below to see how 41 out of 100 is represented as a percentage, fraction and decimal.

Pictorial	Percentage	Fraction	Decimal
	41 parts per hundred 41%	41 out of 100 $\frac{41}{100}$	41 hundredths 0.41

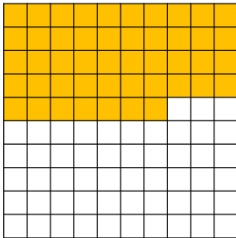
We can represent percentages as fractions and decimals.
Look again at the grid....



70% is shaded.
As a fraction, this is $\frac{70}{100}$ or $\frac{7}{10}$.
As a decimal, this is 0.7

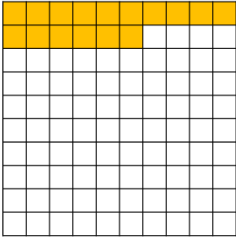
Let’s Practise

Complete the tables for each square
Complete the table..



Percentage	Fraction	Decimal
47%		

Complete the table..



Percentage	Fraction	Decimal
	$\frac{16}{100}$	

Video

Click on the LINK below that explains how percentages can be represented as fractions and decimals.
<https://www.bbc.co.uk/teach/class-clips-video/maths-ks2-decimal-dance-off-1-structure-of-fractions-decimals-and-percentages/z6x8qp3>



Now complete these fraction, decimal and percentage equivalents:

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

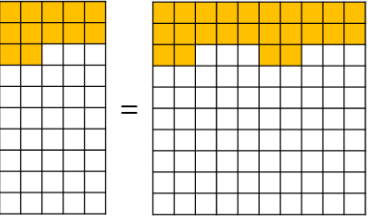
$$35\% = \frac{\boxed{}}{100} = \boxed{}$$

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

Maths: Wednesday

Let's develop our learning

Sometimes, we have to convert a fraction in order to find the equivalent percentage and decimal.

$$\frac{12}{50} = \frac{24}{100} = 24\% = 0.24$$


Percentage	Decimal
24%	0.24

- To convert 12/50 into a percentage we have to ensure the denominator is **100**, so we make an equivalent fraction by multiplying the denominator by 2.
- Following the golden rule, we must then multiply the numerator by 2 also.
- This gives us the fraction 24/100 or 24 hundredths
- We know this is 24 parts out of a hundred or **24%**
- As a decimal, this is **0.24**

Let's Practise

Complete the tables..

Fraction	Converted fraction	Percentage	Decimal
$\frac{16}{50}$	$\frac{32}{100}$		

Fraction	Converted fraction	Percentage	Decimal
$\frac{22}{200}$			

True or False?

32% is equivalent to 3.2

32% is equivalent to $\frac{32}{100}$

Tasks

Challenge 1:

1a. Match the fractions to the equivalent decimal and percentage.

A. $\frac{18}{100}$

0.08

18%

B. $\frac{81}{100}$

0.18

81%

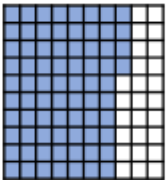
C. $\frac{8}{100}$

0.81

8%



2a. Circle the odd one out.



26%



Maths: Wednesday

Tasks

Challenge 2:

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% $\frac{82}{100}$

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

$\frac{10}{50}$

$\frac{4}{5}$

$\frac{50}{100}$

$\frac{30}{80}$

$\frac{1}{50}$

$\frac{70}{140}$

Challenge 3:

True or False?

0.35 is equivalent to 35%

72% is equivalent to $\frac{36}{50}$

Three classes shared a glue stick order...

Class A took 26% of the glue sticks.

Class B took 30/50 of the glue sticks.



My class (Class C) received 23% of the glue sticks.



Is Caleb correct? Explain why / why not!

Extension:



I have £400.
I spend £84 on a new bike.



What percentage of the money did I spend?

What is this as a fraction?

What percentage of the money do I have left to spend?

What is this as a decimal?

Q3. There are 100 students in my school. 34 of them have blue eyes and the rest has brown eyes. What percentage of the students in my school has brown eyes?

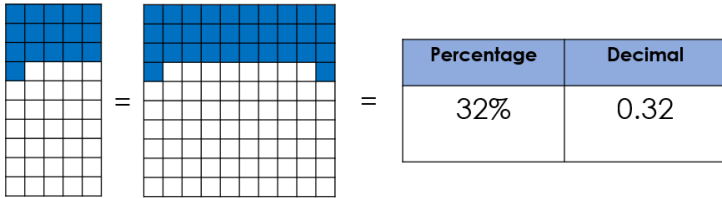
Maths: Thursday

Today we will be learning how to recognise equivalent fractions and represent them as percentages and decimals.

Equivalents

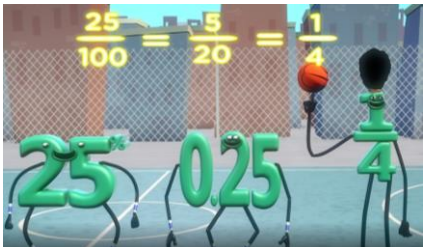
Sometimes, we have to convert a fraction in order to find the equivalent percentage and decimal.

$$\frac{16}{50} = \frac{32}{100} = 32\% = 0.32$$



Click the link below to watch a video about finding equivalent fractions, decimals and percentages.

<https://www.bbc.co.uk/teach/class-clips-video/maths-ks2-decimal-dance-off-2-fractions-decimals-and-percentages/zk9ygvwx>



Examples

We can use our understanding to convert other fractions in percentages....

100%									
1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/5
1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10

$$\frac{4}{5} = \frac{8}{10} = \frac{80}{100} = 80\% = 0.8$$

We use our times table knowledge to find equivalents when converting into percentages, decimals or fractions. For example: $\frac{1}{4} \times 25 = 25/100$. This is the same as 25% or 0.25

We can find equivalent percentages for fractions that have different denominators...

100%			
1/4	1/4	1/4	
1/2			

$$\begin{aligned} \frac{3}{4} \times 25 &= \frac{75}{100} = 75\% = 0.75 \\ \frac{1}{2} \times 50 &= \frac{50}{100} = 50\% = 0.5 \end{aligned}$$

Let's Practise

Convert the following fractions into percentages, then decimals by finding the multiplier and ?

$$\frac{3}{5} = \frac{?}{10} = \frac{?}{100} = ?\% = 0.?$$

$$\frac{2}{5} = \frac{?}{10} = \frac{?}{100} = ?\% = 0.?$$

$$\frac{1}{4} \begin{matrix} (\times ?) \\ (\times ?) \end{matrix} = \frac{?}{100} = ?\% = 0.?$$

$$\frac{2}{25} \begin{matrix} (\times ?) \\ (\times ?) \end{matrix} = \frac{?}{100} = ?\% = 0.?$$

Maths: Thursday

Tasks

Challenge 1:

1b. Match the fractions to the equivalent decimal and percentage.

A. $\frac{25}{100}$	0.5	5%
B. $\frac{5}{100}$	0.25	50%
C. $\frac{50}{100}$	0.05	25%

2. Write these percentages as decimals:

(a) 10% (b) 45% (c) 70% (d) 90%

3. Use the diagram to help you complete the equivalence statements.

100 %									
50%					50%				
20%	20%	20%	20%	20%	20%	20%	20%	20%	20%
10%	10%	10%	10%	10%	10%	10%	10%	10%	10%

a) 1 whole = %

$\frac{1}{2}$ = %

$\frac{1}{5}$ = %

$\frac{1}{10}$ = %

b) $\frac{1}{5}$ = = %

$\frac{2}{5}$ = = %

$\frac{3}{5}$ = = %

$\frac{4}{5}$ = = %

$\frac{5}{5}$ = = %

Challenge 2:

1. Find the answers to the missing boxes to show the equivalent fraction, decimal or percentage.

A. $\frac{64}{200}$ = = 32%

B. = 0.24 = 24%

C. $\frac{36}{100}$ = 0.36 =

True or False?

0.03 < 0.3

$\frac{6}{25}$ > 26%

80% = $\frac{4}{5}$

3. Convert the fractions and decimals below into percentages and then write them in ascending order.

$\frac{22}{200}$
 $\frac{58}{100}$
0.5
 $\frac{30}{300}$
0.15

Challenge 3:

1. 4a. There are 200 sweets in a jar.

Lucy takes $\frac{3}{10}$ of the sweets. Alice takes 50% of the sweets.



How many does each child have?
How many are left in the jar?
What percentage is this?

2. Filip gets some money for his birthday.
He spends $\frac{2}{5}$ of his money and saves the rest.
What percentage does he save?

3. Jane's school took part in a sponsored run.
The school raised £400 in total.
What percentage of the total has each class raised?

Year 1 = £56	Year 2 = £64	Year 3 = £32
Year 4 = £96	Year 5 = £88	Year 6 = £?

How much money did Year 6 raise?