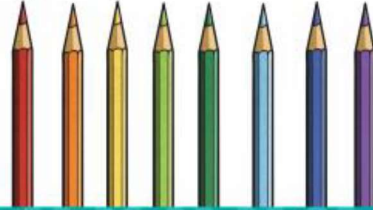


Year 6 Multiplication and Division Challenge Cards



Year 6 Multiplication and Division Challenge Cards

1. There are 24 pencils in a box. In one day, a pencil manufacturer fills 4289 boxes. How many pencils are there in the boxes?



Remember
To write
down the
multiples of
the number
you are
dividing by
before you
try to do the
long
division.

e.g
 $7859 \div 29$
29
58
87
116
145
174
203
232
261
290

29)7859

Year 6 Multiplication and Division Challenge Cards

2. One gigabyte (GB) is 1024 megabytes (MB). A computer file is 27GB. How many megabytes is the file?



Year 6 Multiplication and Division Challenge Cards

3. Calculate:

$$5723 \times 65 =$$

$$7083 \times 83 =$$

$$6817 \times 57 =$$

$$2235 \times 36 =$$

$$4929 \times 67 =$$



Year 6 Multiplication and Division Challenge Cards

4. Calculate:

$$1402 \times 61 =$$

$$5354 \times 64 =$$

$$4852 \times 23 =$$

$$7908 \times 32 =$$

$$9853 \times 94 =$$



Year 6 Multiplication and Division Challenge Cards

5. Complete this missing number calculation:

$$\begin{array}{r} 7 \square 9 \square \\ \times \quad \square 7 \\ \hline 50351 \\ 287720 \\ \hline \square \square \square \square \square \end{array}$$

Year 6 Multiplication and Division Challenge Cards

6. Complete this missing number calculation:

$$\begin{array}{r} \square 8 \square 7 \\ \times \quad \square 8 \square \\ \hline 11588 \\ 231760 \\ \hline \square \square \square \square \square \end{array}$$

Year 6 Multiplication and Division Challenge Cards

7. Calculate:

$$7859 \div 29 =$$

$$5928 \div 38 =$$

$$3404 \div 37 =$$

$$4032 \div 63 =$$

$$5394 \div 87 =$$



Year 6 Multiplication and Division Challenge Cards - Answers

1. 102 936 pencils

2. 27 648MB

3. $5723 \times 65 = 371\ 995$

$7083 \times 83 = 587\ 889$

$6817 \times 57 = 388\ 569$

$2235 \times 36 = 80\ 460$

$4929 \times 67 = 330\ 243$

4. $1402 \times 61 = 85\ 522$

$5354 \times 64 = 342\ 656$

$4852 \times 23 = 111\ 596$

$7908 \times 32 = 253\ 056$

$9853 \times 94 = 926\ 182$

5. 7193

x 47

50351

287720

338071

6. 2897

x 84

11588

231760

243348

7. $7859 \div 29 = 271$

$5928 \div 38 = 156$

$3404 \div 37 = 92$

$4032 \div 63 = 64$

$5394 \div 87 = 62$



Percentages

Where have you seen the word 'percent' before? What does it mean?



Make a poster to show where you might have seen % before.

Write in bold writing that percent represents hundredths. A percentage is a fraction with a denominator of 100. Also, in decimal form, a percentage can be found from the first 2 digits after the decimal point.

$$80\% = \frac{8}{100} = 0.8$$

- $25\% = \frac{25}{100} = \frac{1}{4}$
- $50\% = \frac{50}{100} = \frac{1}{2}$
- $75\% = \frac{75}{100} = \frac{3}{4}$
- $10\% = \frac{10}{100} = \frac{1}{10}$
- $20\% = \frac{20}{100} = \frac{2}{10}$

FRACTIONS, DECIMALS AND PERCENTAGES

There are some facts that you just have to learn off by heart. Make these facts into a poster that you can refer to when calculating percentages. Stick it somewhere where you can see it often and learn it.

Send me a picture of your finished posters.

Maths talk

What does the word percent mean?

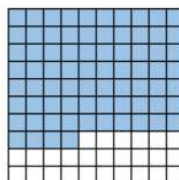
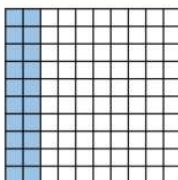
All about percentages

How can you convert tenths to hundredths?

Why is it easy to convert fiftieths to hundredths?

What other fractions are easy to convert to percentages?

- What fraction of each hundred square is shaded? Write the fractions as percentages.



- Complete the table.

Fraction	Percentage
$\frac{1}{2}$	
$\frac{1}{4}$	
$\frac{1}{10}$	
$\frac{1}{5}$	

- Fill in the missing numbers.

$$\frac{12}{100} = \square \% \quad \frac{\square}{100} = 35\%$$

$$\frac{12}{50} = \frac{\square}{100} = \square \% \quad \frac{44}{\square} = \frac{22}{100} = 22\%$$

Remembering how to divide and multiply by a power of 10, 100 will help you solve the percentages questions. If you remember percentages are ALWAYS out of 100. You can find the percentage of any number by using the formula

Divide by 100 and then times the answer by the percentage asked.

Dividing the starting number by 100 find 1% then times this by the percentage asked for.

For example find 30% of 750

Divide 750 by 100=7.5

Multiply 7.5 by 30 = 225

Practice these

Multiply
by
10, 100 or
1000
Easier

Multiplying by 10, 100 or 1000

Multiply the numbers in the dragons by 10, 100 or 1000. Colour in the dragons and their answers in the eggs in matching colours.

31 17 52 26 87 93

23 37

310 93 000 54 000 230 17 000 240 5 200 52 000 370 860 260

1 700 2 300 87 000 9 500 3 100 350 870 37 000 9 300 26 000

Multiply
by
10, 100 or
1000

Multiplying and Dividing by 10 and 100

$5 \times 10 = \underline{\quad}$

$5 \div 10 = \underline{\quad}$

$6 \times 100 = \underline{\quad}$

$8 \div 10 = \underline{\quad}$

$7 \div 10 = \underline{\quad}$

$7 \times 100 = \underline{\quad}$

$4 \times 10 = \underline{\quad}$

$8 \times 10 = \underline{\quad}$

$70 \div 100 = \underline{\quad}$

$3 \times 100 = \underline{\quad}$

$6 \times 10 = \underline{\quad}$

$2 \div 10 = \underline{\quad}$

$2 \times 100 = \underline{\quad}$

$80 \div 100 = \underline{\quad}$

$28 \div 10 = \underline{\quad}$

$9 \times 10 = \underline{\quad}$

Fill in the missing numbers:

$7 \times \underline{\quad} = 700$

$64 \div \underline{\quad} = 6.4$

$30 \div \underline{\quad} = 0.3$

$3 \times \underline{\quad} = 30$

Fill in the space with either \times or \div so that the calculation is correct:

$62 \underline{\quad} 10 = 6.2$

$4 \underline{\quad} 10 = 40$

$5 \underline{\quad} 100 = 500$

$40 \underline{\quad} 100 = 0.4$

True (T) or False (F):

$7 \times 100 = 70 \quad \square$

$79 \div 10 = 790 \quad \square$

$30 \div 100 = 0.3 \quad \square$

$1 \times 10 = 10 \quad \square$

Multiply
by
10, 100 or
1000
More
challenging

Multiplying and Dividing by 10 and 100

$874 \times 10 = \underline{\hspace{2cm}}$

$2264 \div 10 = \underline{\hspace{2cm}}$

$275 \times 100 = \underline{\hspace{2cm}}$

$765 \div 10 = \underline{\hspace{2cm}}$

$3873 \div 10 = \underline{\hspace{2cm}}$

$817 \times 100 = \underline{\hspace{2cm}}$

$673 \times 10 = \underline{\hspace{2cm}}$

$734 \times 10 = \underline{\hspace{2cm}}$

$3802 \div 100 = \underline{\hspace{2cm}}$

$403 \times 100 = \underline{\hspace{2cm}}$

$204 \times 10 = \underline{\hspace{2cm}}$

$1864 \div 10 = \underline{\hspace{2cm}}$

$309 \times 100 = \underline{\hspace{2cm}}$

$3908 \div 100 = \underline{\hspace{2cm}}$

$3002 \div 10 = \underline{\hspace{2cm}}$

$8764 \times 10 = \underline{\hspace{2cm}}$

$4000 \div 100 = \underline{\hspace{2cm}}$

$201 \times 100 = \underline{\hspace{2cm}}$

Fill in the missing numbers:

$467 \times \underline{\hspace{2cm}} = 4670$

$683 \div \underline{\hspace{2cm}} = 68.3$

$536 \div \underline{\hspace{2cm}} = 5.36$

$855 \times \underline{\hspace{2cm}} = 85\,500$

Fill in the space with either \times or \div so that the calculation is correct:

$742 \underline{\hspace{1cm}} 10 = 74.2$

$4230 \underline{\hspace{1cm}} 10 = 42\,300$

$873 \underline{\hspace{1cm}} 100 = 8.73$

$767 \underline{\hspace{1cm}} 10 = 7670$

True (T) or False (F):

$287 \times 100 = 28\,700 \quad \square$

$209 \div 10 = 2.09 \quad \square$

$176 \div 100 = 600 \quad \square$

$602 \times 10 = 6200 \quad \square$

Answers

$5 \times 10 = 50$

$6 \times 100 = 600$

$7 \div 10 = 0.7$

$4 \times 10 = 40$

$70 \div 100 = 0.7$

$6 \times 10 = 60$

$2 \times 100 = 200$

$28 \div 10 = 2.8$

$5 \div 10 = 0.5$

$8 \div 10 = 0.8$

$7 \times 100 = 700$

$8 \times 10 = 80$

$3 \times 100 = 300$

$2 \div 10 = 0.2$

$80 \div 100 = 0.8$

$9 \times 10 = 90$

Fill in the missing numbers:

$7 \times 100 = 700$

$30 \div 100 = 0.3$

$64 \div 10 = 6.4$

$3 \times 10 = 30$

Fill in the space with either \times or \div so that the calculation is correct:

$62 \div 10 = 6.2$

$5 \times 100 = 500$

$4 \times 10 = 40$

$40 \div 100 = 0.4$

True (T) or False (F):

$7 \times 100 = 70$ ☐ F

$30 \div 100 = 0.3$ ☐ T

$79 \div 10 = 790$ ☐ F

$1 \times 10 = 10$ ☐ T

Answers

$874 \times 10 = 8740$

$275 \times 100 = 27\,500$

$3873 \div 10 = 387.3$

$673 \times 10 = 6730$

$3802 \div 100 = 38.02$

$204 \times 10 = 2040$

$309 \times 100 = 30\,900$

$3002 \div 10 = 300.2$

$4000 \div 100 = 40$

$2264 \div 10 = 226.4$

$765 \div 10 = 76.5$

$817 \times 100 = 81\,700$

$734 \times 10 = 7340$

$403 \times 100 = 40\,300$

$1864 \div 10 = 186.4$

$3908 \div 100 = 39.08$

$8764 \times 10 = 87\,640$

$201 \times 100 = 20\,100$

Fill in the missing numbers:

$467 \times 10 = 4670$

$536 \div 100 = 5.36$

$683 \div 10 = 68.3$

$855 \times 100 = 85\,500$

Fill in the space with either \times or \div so that the calculation is correct:

$742 \div 10 = 74.2$

$873 \div 100 = 8.73$

$4230 \times 10 = 42\,300$

$767 \times 10 = 7670$

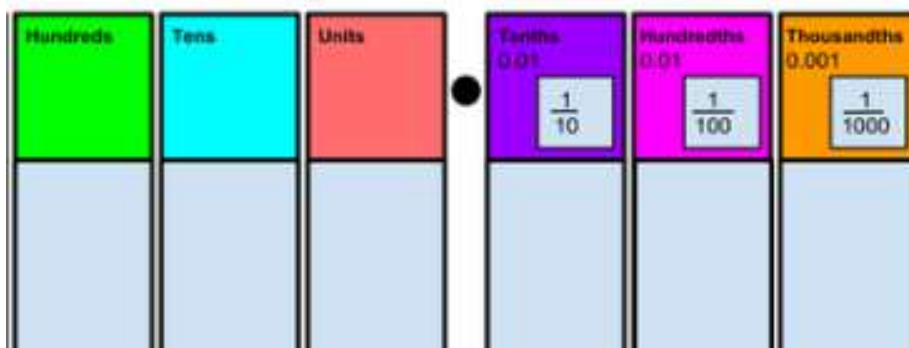
True (T) or False (F):

$287 \times 100 = 28\,700$ ☐ T

$176 \div 100 = 600$ ☐ F

$209 \div 10 = 2.09$ ☐ F

$602 \times 10 = 6200$ ☐ F



If you use place value card

100% = 1 whole

1% is one hundredth 0.01 or $\frac{1}{100}$

50% is 0.50 or $\frac{50}{100}$ simplified to $\frac{5}{10}$ or $\frac{1}{2}$

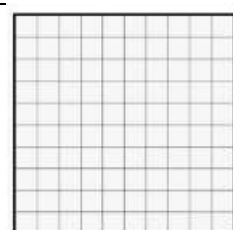
Can you solve this?

4a. Match the grids to their percentages.

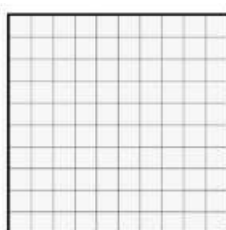
A 70%

B 60%

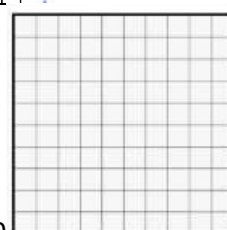
C 63%



colour 40% 40/100



colour 75% 75/100



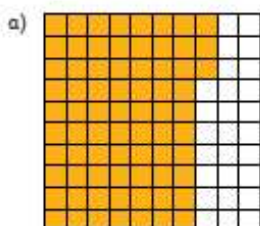
colour 32% 32/100

Complete the statements.

We can draw a percentage of a 100 grid like these

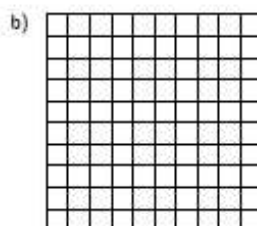


1) Complete the statements.



_____ parts per 100 shaded

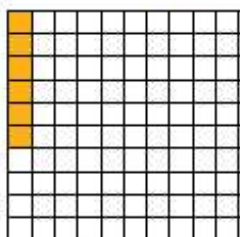
$= \frac{\quad}{100} = 0.73$



4 parts per 100 shaded

$= \frac{\quad}{100} = \quad$

2) Circle the odd one out. Explain why you chose it.



6 parts per 100 shaded

6%

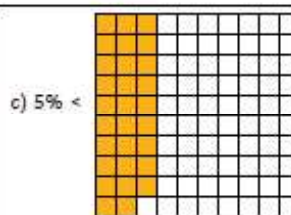
0.6

$\frac{6}{100}$

3) True or False?

a) $\frac{85}{100} < 0.9 > 12\%$

b) 20 parts per hundred $> 2\% > 0.1$



c) 5% <

< 0.4

4) Complete the following number statements.

Fraction	Fraction with a Denominator of 100	Percentage	Decimal
$\frac{20}{50}$	$\frac{40}{100}$	_____ %	
$\frac{12}{50}$	$\frac{\quad}{100}$	_____ %	
$\frac{20}{200}$	$\frac{\quad}{100}$	_____ %	
$\frac{90}{200}$	$\frac{\quad}{100}$	_____ %	

Fractions to percentages

Reasoning and problem solving

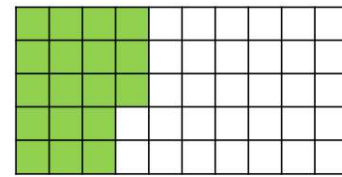
Remove the rectangular shapes to reveal the answers.

In a Maths test, Tommy answered 62% of the questions correctly.

Rosie answered $\frac{3}{5}$ of the questions correctly.

Who answered more questions correctly?

Explain your answer.



Amir thinks that 18% of the grid has been shaded.

Dora thinks that 36% of the grid has been shaded.

Who do you agree with?

Explain your reasoning.

Game

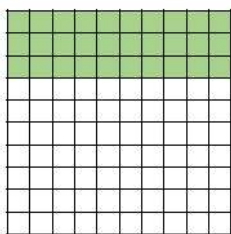
Match Fractions Decimals and Percentages - Mathsframe

Match fractions, decimals and percentages

Fractions	Decimals	Percentages
$\frac{1}{4}$		50%
$\frac{1}{10}$		
$\frac{1}{5}$		
	0.01	
		1%

Use this game to help you match fractions, decimals and percentages.

1a. Match the grid to the correct percentage.



40%

50%

30%

Match the fractions to the equivalent decimal and percentage.

A. $\frac{62}{100}$

0.54

19%

B. $\frac{54}{100}$

0.19

54%

C. $\frac{38}{200}$

0.62

62%

Hafsa and Chuan are converting fractions and decimals into percentages.



0.42 as a percentage is 42%.

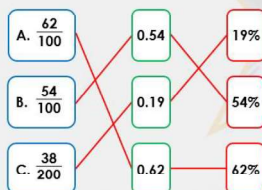
$\frac{84}{200}$ as a percentage is 42%.



Who is correct?
Explain how you know.

Answers
30%

Varied Fluency 1
Match the fractions to the equivalent decimal and percentage.



They are both correct because 0.42 and $\frac{84}{200} = 42\%$.

Complete the table.

Decimal	Fraction	Percentage
0.35	$\frac{35}{100}$	35%
0.27		
0.6		
0.06		

Use $<$, $>$ or $=$ to complete the statements.

0.36 40%

$\frac{7}{10}$ 0.07

0.4 25%

0.4 $\frac{1}{4}$

Which of these are equivalent to 60%?

$\frac{60}{100}$

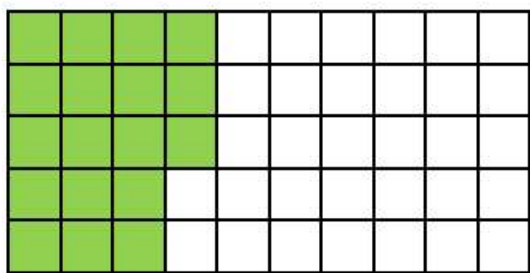
$\frac{6}{100}$

0.06

$\frac{3}{5}$

$\frac{3}{50}$

0.6



Amir thinks that 18% of the grid has been shaded.

Dora thinks that 36% of the grid has been shaded.

Who do you agree with?

Explain your reasoning.

9a. Represent 70% on the grids below.

