

%

Percentages

%

Per cent means -

per 100

out of 100

Some important percentages:

$$75\% = \frac{3}{4}$$

$$2\% = \frac{2}{100}$$

$$50\% = \frac{1}{2} = \frac{50}{100}$$

$$1\% = \frac{1}{100}$$

$$100\% = 1$$

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

$$25\% = \frac{1}{4} = \frac{25}{100}$$

LO: understand that 'percentage' means
'number of parts per 100'
and use this to compare proportions

How to change between percentages, fractions or decimals

$$\frac{1}{4} = 25\% \quad \frac{1}{2} = 0.5 = 50\%$$
$$= 0.25 \quad \frac{5}{10} = \frac{50}{100} = \frac{1}{2}$$

$$3\% = \frac{3}{100} = 0.03$$

$$20\% = \frac{20}{100} = \frac{2}{10} = \frac{1}{5} = 0.2$$
$$\frac{3}{10} = \frac{30}{100} = 30\% = 0.3$$

wwpercentages

How to compare fractions, decimals and percentages

Which is bigger:

$\frac{1}{2} = 0.5$ $45\% = 0.45$

0.51

$\frac{8}{10} = 0.8$ $78\% = 0.78$

0.88

0.2 $\frac{1}{2}$

20%

wwpercentages

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fdp
equivalence
cards

Fraction to decimal match.
Ext: write as a percentage

Fractions...

$$\frac{5}{10} = \frac{1}{2} < \frac{100}{200}$$
$$\frac{20}{40}$$

$$\frac{3}{4}$$

$$\frac{9}{10}$$

$$\frac{4}{5} \quad \frac{6}{10} \quad \frac{7}{10}$$

$$\frac{8}{10}$$

$$\frac{1}{4} >$$

$$\frac{1}{5} \cdot \frac{1}{6} \cdot \frac{1}{7}$$

..and decimals..

Inbetween sheet

0.5

0.4

0.3

0.2

0.1

0.0000000

0.004

0.11

0.03

0.01 0.02

0.07 0.05

0.08

0.00001

Match the decimal, percentage and fraction

0.01	1%	$\frac{1}{100}$
0.25	25%	$\frac{1}{4} = \frac{25}{100}$
0.1	10%	$\frac{1}{10}$
0.5	50%	$\frac{1}{2}$
0.42	42%	$\frac{21}{50} = \frac{42}{100}$

equiv. cards

Homework

Page 161: B1-B6
For Tuesday

How to work out a percentage of a given quantity.

(easy ones)

$$\begin{array}{l} \mathbf{50\%} \text{ of } 66 \\ \left(\frac{1}{2}\right) = 33 \end{array}$$

$$\begin{array}{l} \mathbf{75\%} \text{ of } 40 \\ \left(\frac{3}{4}\right) = 30 \end{array}$$

$$\begin{array}{l} \left(\frac{1}{4}\right) \\ \mathbf{25\%} \text{ of } 60 \\ = 15 \end{array}$$

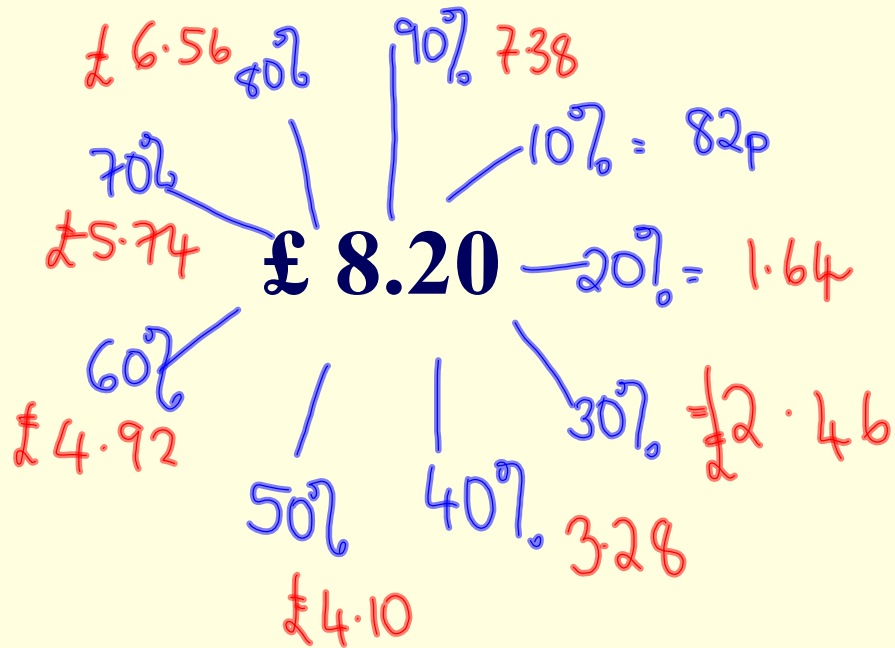
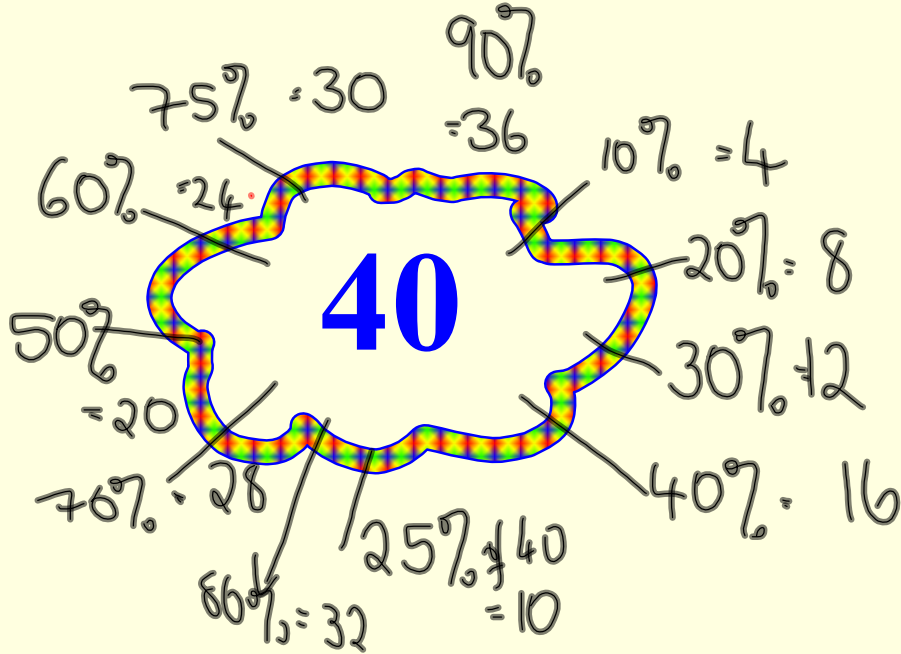
$$\begin{array}{l} \mathbf{10\%} \text{ of } 70 \\ \left(\frac{1}{10}\right) = 7 \end{array}$$

worksheet

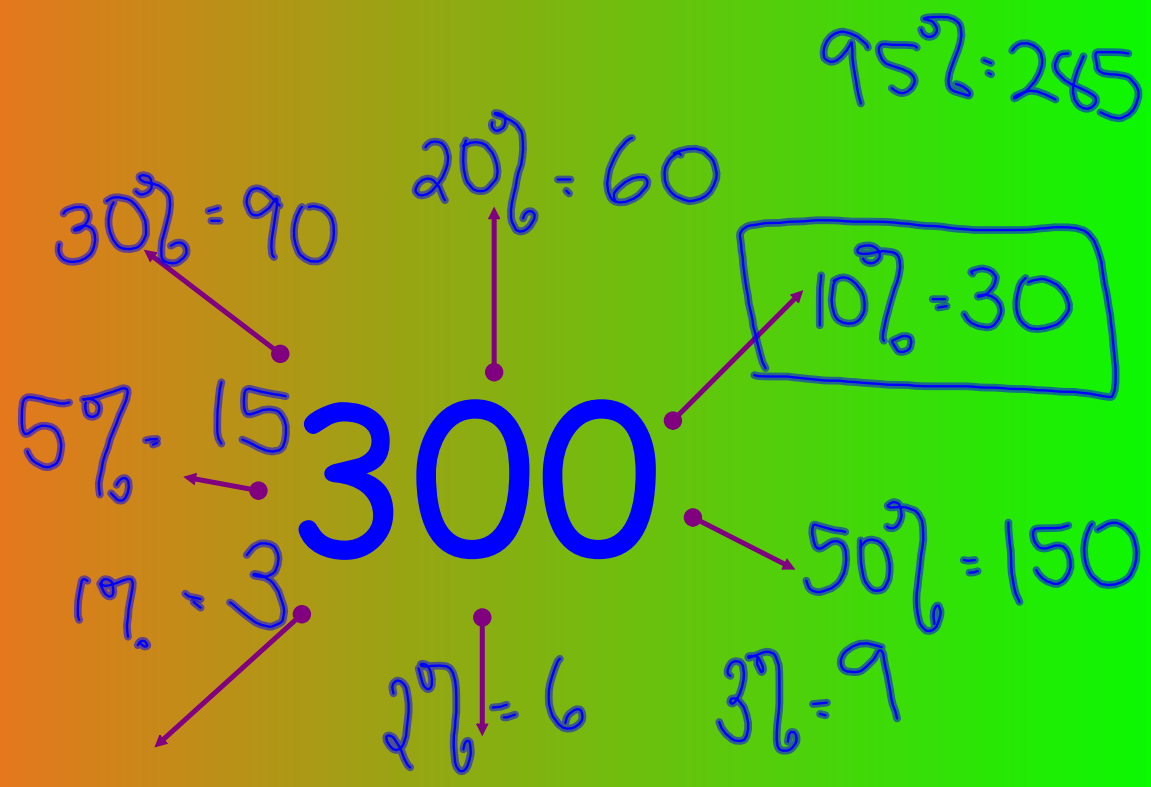
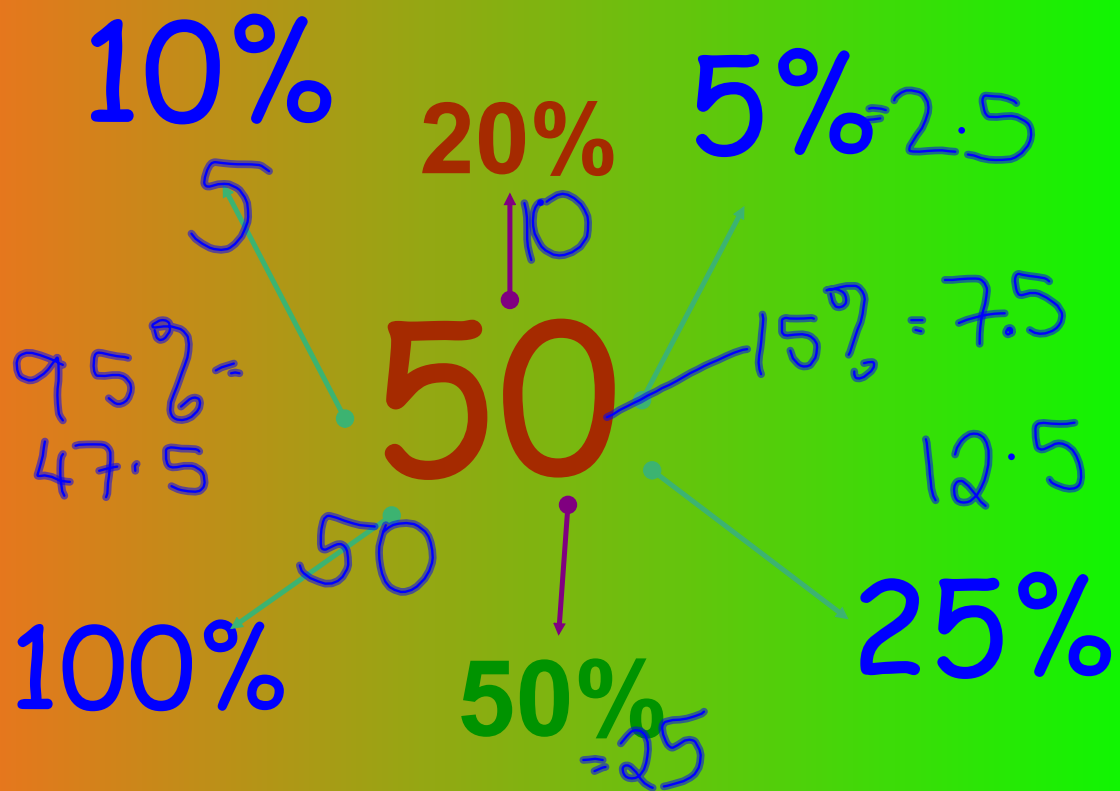
Finding a percentage of an amount.

without a calculator!

(hard ones!)

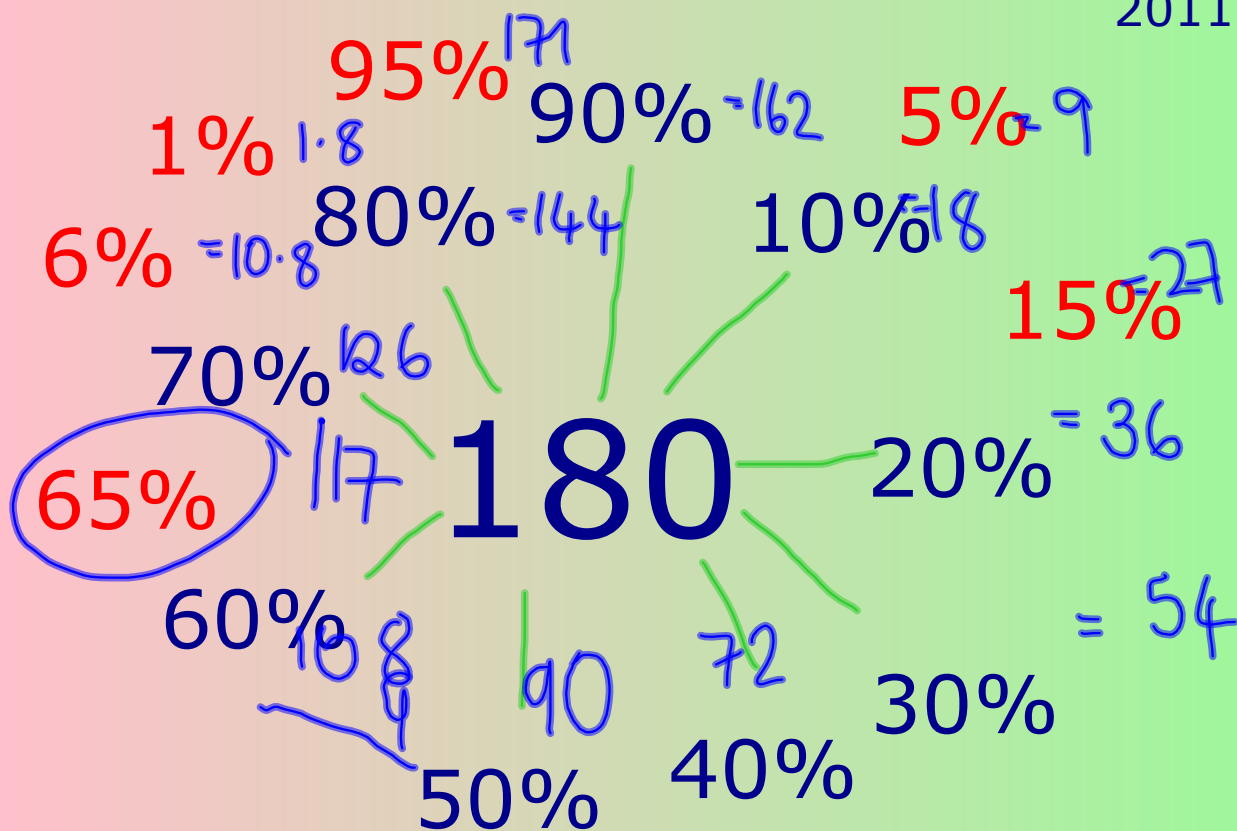


60



Working out Percentages

8th Dec
2011



Percentage bingo
3x4 grid with nos 1-50

Green book page 51

Reading a percentage table

Here is a percentage table:

	50	60	130	340
5%	2.5	3	6.5	17
10%	5	6	13	34
50%	25	30	65	170

Use the information in the table to answer these questions:

1. Find 10% of 340 = 34
2. Find 5% of 130 = 6.5
3. Find 15% of 60 = 9
4. Find 20% of 50 = 10
5. Find $2\frac{1}{2}\%$ of 340 = 8.5
6. Find 17.5% of 60 = $6 + 3 + 1.5 = 10.5$

Fill in the gaps:

7. 170 is 50 % of 340
8. 6.5 is 5 % of 130
9. 12 is 20 % of 60

Increasing by a percentage

Increase £60 by 10%

$$\text{Find } 10\% \text{ of } 60 = \pounds 6$$

$$\text{New price} = \pounds 60 + \pounds 6 = \pounds 66$$

Increase £60 by 20%

$$10\% \text{ of } 60 = 6$$

$$20\% \text{ of } 60 = 12$$

$$60 + 12 = \pounds 72$$

Increase £34.20 by 10%

$$10\% \text{ of } \pounds 34.20 = 3.42$$

$$\begin{array}{r} 34.20 \\ + 3.42 \\ \hline 37.62 \end{array} \quad \pounds 37.62$$

Decreasing by a percentage

Decrease £60 by 10%

$$10\% \text{ of } 60 = 6$$

$$60 - 6 = \text{£}54$$

Decrease £60 by 20%

$$20\% \text{ of } 60 = 12$$

$$60 - 12 = \text{£}48$$

Decrease £30.00 by 15%

$$10\% \text{ of } 30 = 3$$

$$5\% \text{ of } 30 = 1.5$$

$$15\% \text{ of } 30 = 4.5$$

$$\begin{array}{r} \overset{2}{3}0.\overset{1}{0}0 \\ - 4.50 \\ \hline \underline{\underline{25.50}} \end{array}$$

Black Interact book
page 528

Either A (easier)

or section B (D/C grade)

Make a display, using any number,
showing as many percentages as you can.

Attachments

f,p,decimals.doc

percentages homework.doc