

Percentage of Amounts Homework



No calculator!

<h2 style="text-align: center;">Literacy</h2> <p>'%' means 'out of a hundred'</p> <p>Eg:</p> $20\% = \frac{20}{100} = \frac{1}{5}$ <p>'of' means 'x'</p> <p>Eg:</p> $20\% \text{ of } 40 = \frac{1}{5} \times 40 = \frac{40}{5} = 8$	<h2 style="text-align: center;">Research</h2> <p>Find out what rate of interest each of these lenders charges customers: (the first one has been done for you)</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Sainsbury's Bank Loan</td> <td style="width: 50%;">Standard loan (£7.5k-£15k) 4.1%</td> </tr> <tr> <td>Tesco Credit Card</td> <td></td> </tr> <tr> <td>Wonga Payday Loan</td> <td></td> </tr> </table> <p style="text-align: center; font-size: small;">These should be given as APR (Annual Percentage Rate)</p>	Sainsbury's Bank Loan	Standard loan (£7.5k-£15k) 4.1%	Tesco Credit Card		Wonga Payday Loan		<h2 style="text-align: center;">Memory</h2> <ul style="list-style-type: none"> Learn the common percentage to fraction conversions. <i>This will save time for easy and hard questions.</i> <table style="width: 100%; text-align: center;"> <tr> <td>100% = 1</td> <td>20% = $\frac{1}{5}$</td> </tr> <tr> <td>75% = $\frac{3}{4}$</td> <td>10% = $\frac{1}{10}$</td> </tr> <tr> <td>50% = $\frac{1}{2}$</td> <td>5% = $\frac{1}{20}$</td> </tr> <tr> <td>25% = $\frac{1}{4}$</td> <td>1% = $\frac{1}{100}$</td> </tr> </table>	100% = 1	20% = $\frac{1}{5}$	75% = $\frac{3}{4}$	10% = $\frac{1}{10}$	50% = $\frac{1}{2}$	5% = $\frac{1}{20}$	25% = $\frac{1}{4}$	1% = $\frac{1}{100}$
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<h2 style="text-align: center;">Skills</h2> <p>Convert % to fractions to find:</p> <p>1) 50% of £30 =</p> <p>2) 5% of £90 =</p> <p>3) 20% of 35kg =</p> <p>4) 75% of 600cm =</p> <p style="text-align: center; font-size: small;"><i>Simplify your answers where possible. Show ALL your working.</i></p> <p>5) 10% of £14 =</p> <p>6) 30% of £14 =</p> <p>7) 5% of £14 =</p> <p>8) Use the answers above to find: 35% of £14 =</p>		<h2 style="text-align: center;">Stretch</h2> <p>Using a similar method to question 8:</p> <p>1) 27% of 40kg =</p> <p>2) 99% of \$12 =</p> <p>Extra challenge:</p> <p>3) If 16% of 47g = 7.52g, Find the value of 47% of 16g.</p>														

You need to **read** and **learn** the **Literacy** and **Memory** sections, **look up** answers to the **Research** section, **answer all** questions from the **Skills** section, and (unless you have already spent more than 45 minutes on this homework) **attempt** the **Stretch** section. Answers can be written on the sheet or in your book if you need more space.

Percentage of Amounts Homework SOLUTIONS



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Literacy

'%' means 'out of a hundred'

Eg:

$$20\% = \frac{20}{100} = \frac{1}{5}$$

'of' means 'x'

Eg:

$$20\% \text{ of } 40 = \frac{1}{5} \times 40 = \frac{40}{5} = 8$$

Research

Find out what rate of interest each of these lenders charges customers:
(the first one has been done for you)

Sainsbury's Bank Loan	Standard loan (£7.5k-£15k) 4.1%
Tesco Credit Card	Credit limit: £1200 18.9%
Wonga Payday Loan	Short term: £150, 18 days 5853%

These should be given as APR (Annual Percentage Rate)

Memory

- Learn the common percentage to fraction conversions. *This will save time for easy and hard questions.*

$$100\% = 1 \qquad 20\% = \frac{1}{5}$$

$$75\% = \frac{3}{4} \qquad 10\% = \frac{1}{10}$$

$$50\% = \frac{1}{2} \qquad 5\% = \frac{1}{20}$$

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

Skills

Convert % to fractions to find:

1) 50% of £30 =

$$\frac{1}{2} \times 30 = \text{£15}$$

2) 5% of £90 =

$$\frac{1}{20} \times 90 = \text{£4.50}$$

3) 20% of 35kg =

$$\frac{1}{5} \times 35 = \text{7kg}$$

4) 75% of 600cm =

$$\frac{3}{4} \times 600 = \text{450cm}$$

5) 10% of £14 = $\frac{1}{10} \times 14 = \text{£1.40}$

6) 30% of £14 = $\frac{3}{10} \times 14 = \text{£4.20}$

7) 5% of £14 = $\frac{1}{20} \times 14 = \text{£0.70}$

8) Use the answers above to find:

35% of £14 =

$$30\% \text{ of } \text{£14} + 5\% \text{ of } \text{£14}$$

$$= \text{£4.20} + \text{£0.70} = \text{£4.90}$$

Simplify your answers where possible. Show ALL your working.

Stretch

Using a similar method to question 8:

1) 27% of 40kg =

$$3 \times 10\% \text{ of } 40 - 3 \times 1\% \text{ of } 40$$

$$= 3 \times 4 - 3 \times 0.4$$

$$= 12 - 1.2 = \text{10.8kg}$$

2) 99% of \$12 =

$$100\% \text{ of } 12 - 1\% \text{ of } 12$$

$$= 12 - 0.12 = \text{\$11.88}$$

Extra challenge:

3) If 16% of 47g = 7.52g,

Find the value of 47% of 16g.

$$\frac{47}{100} \times 16 = \frac{16}{100} \times 47 = \text{7.52g}$$

You need to **read** and **learn** the **Literacy** and **Memory** sections, **look up** answers to the **Research** section, **answer all** questions from the **Skills** section, and (unless you have already spent more than 45 minutes on this homework) **attempt** the **Stretch** section. Answers can be written on the sheet or in your book if you need more space.