

One Number as a Percentage of Another - Worksheet

Skill

Group A - Finding an equivalent fraction with a denominator of 100

Write these as fraction with a denominator of 100:

- | | | |
|-----------------|------------------|------------------|
| 1) 3 out of 10 | 2) 7 out of 10 | 3) 9 out of 10 |
| 4) 15 out of 50 | 5) 23 out of 50 | 6) 41 out of 50 |
| 7) 11 out of 25 | 8) 22 out of 25 | 9) 7 out of 25 |
| 10) 5 out of 20 | 11) 12 out of 20 | 12) 17 out of 20 |

Group B - Finding a percentage without a calculator

Write these as percentages:

- | | | |
|-----------------|------------------|------------------|
| 1) 3 out of 10 | 2) 7 out of 10 | 3) 9 out of 10 |
| 4) 15 out of 50 | 5) 23 out of 50 | 6) 41 out of 50 |
| 7) 11 out of 25 | 8) 22 out of 25 | 9) 7 out of 25 |
| 10) 5 out of 20 | 11) 12 out of 20 | 12) 17 out of 20 |

Group C - Finding a percentage with a calculator

Express these as percentages:

- | | | |
|-------------------|-------------------|--------------------|
| 1) 12 out of 30 | 2) 18 out of 30 | 3) 27 out of 30 |
| 4) 60 out of 80 | 5) 12 out of 80 | 6) 52 out of 80 |
| 7) 36 out of 120 | 8) 66 out of 120 | 9) 78 out of 120 |
| 10) 33 out of 150 | 11) 48 out of 150 | 12) 102 out of 150 |

One Number as a Percentage of Another - Worksheet

Applied

- 1) (a) Express 12cm as a percentage of 2m .
(b) Express 840g as a percentage of 4kg .
- 2) (a) Express 45 minutes as a percentage of 3 hours.
(b) Express 18 hours as a percentage of 1 day.
- 3) (a) A motorist has to drive a distance of 300km .
After an hour she has driven 81km .
What percentage of her journey has she now completed?
(b) A motorist has to drive a distance of 700km .
After 2 hours he has driven 147km .
What percentage of his journey has he now completed?
- 4) (a) In a room there are 9 adults and 16 children.
What percentage of the people are adults?
(b) In a room there are 26 men and 14 women.
What percentage of people are men?

One Number as a Percentage of Another - Exam Questions

- 1) Non-calc: There are 30 children in a class.
24 of the children have a packed lunch.
What percentage of children have a packed lunch?

.....%

(2 marks)

- 2) Calc: Ayesha buys a pack of 12 bottles of drink.
The pack costs £3.92.
She sells all 12 bottles for 40p.
Work out her percentage profit.
Give your answer correct to 1 decimal place.

.....%

(3 marks)

- 3) Calc: Amelia scored 38 out of 65 in a Biology test.
She scored 40 out of 70 in a Chemistry test.
She scored 55 out of 90 in a Physics test.
- In which test did Amelia score the highest percentage? You must show your workings.

.....

(3 marks)

One Number as a Percentage of Another - Answers

	Question	Answer
	Skill Questions	
Group A	Write these as fraction with a denominator of 100:	
	1) 3 out of 10	1) $\frac{30}{100}$
	2) 7 out of 10	2) $\frac{70}{100}$
	3) 9 out of 10	3) $\frac{90}{100}$
	4) 15 out of 50	4) $\frac{30}{100}$
	5) 23 out of 50	5) $\frac{46}{100}$
	6) 41 out of 50	6) $\frac{82}{100}$
	7) 11 out of 25	7) $\frac{44}{100}$
	8) 22 out of 25	8) $\frac{88}{100}$
	9) 7 out of 25	9) $\frac{28}{100}$
	10) 5 out of 20	10) $\frac{25}{100}$
	11) 12 out of 20	11) $\frac{60}{100}$
	12) 17 out of 20	12) $\frac{85}{100}$

One Number as a Percentage of Another - Answers

Group B	<p>Write these as percentages:</p> <p>1) 3 out of 10 2) 7 out of 10 3) 9 out of 10 4) 5 out of 20 5) 12 out of 20 6) 17 out of 20 7) 11 out of 25 8) 22 out of 25 9) 7 out of 25 10) 15 out of 50 11) 23 out of 50 12) 41 out of 50</p>	<p>1) 30% 2) 70% 3) 90% 4) 25% 5) 60% 6) 85% 7) 44% 8) 88% 9) 28% 10) 30% 11) 46% 12) 82%</p>
Group C	<p>Express these as percentages:</p> <p>1) 12 out of 30 2) 18 out of 30 3) 27 out of 30 4) 60 out of 80 5) 12 out of 80 6) 52 out of 80 7) 36 out of 120 8) 66 out of 120 9) 78 out of 120 10) 33 out of 150 11) 48 out of 150 12) 102 out of 150</p>	<p>1) 40% 2) 60% 3) 90% 4) 75% 5) 15% 6) 65% 7) 30% 8) 55% 9) 65% 10) 22% 11) 32% 12) 68%</p>

One Number as a Percentage of Another - Answers

	Question	Answer
	Applied Questions	
1)	a) Express 12 <i>cm</i> as a percentage of 2 <i>m</i> . b) Express 840 <i>g</i> as a percentage of 4 <i>kg</i> .	a) 6% b) 21%
2)	a) Express 45 minutes as a percentage of 3 hours. b) Express 18 hours as a percentage of 1 day.	a) 25% b) 75%
3)	a) A motorist has to drive a distance of 300 <i>km</i> . After an hour she has driven 81 <i>km</i> . What percentage of her journey has she now completed? b) A motorist has to drive a distance of 700 <i>km</i> . After 2 hours he has driven 147 <i>km</i> . What percentage of his journey has he now completed?	a) 27% b) 21%
4)	a) In a room there are 9 adults and 16 children. What percentage of the people are adults? b) In a room there are 26 men and 14 women. What percentage of people are men?	a) 36% b) 65%

One Number as a Percentage of Another - Mark Scheme

	Question	Answer	
	Exam Questions		
1)	Non-calc: There are 30 children in a class. 24 of the children have a packed lunch. What percentage of children have a packed lunch?	$\frac{24}{30}$ $\frac{24}{30} = \frac{8}{10} = \frac{80}{100} = 80\%$	(1) (1)
2)	Calc: Ayesha buys a pack of 12 bottles of drink. The pack costs £3. 92. She sells all 12 bottles for 40p. Work out her percentage profit. Give your answer correct to 1 decimal place.	$12 \times 40 = 480p = £4.80$ $\frac{4.80-3.92}{3.92}$ oe $0.2244... \times 100 = 22.4\%$	(1) (1) (1)
3)	Calc: Amelia scored 38 out of 65 in a Biology test. She scored 40 out of 70 in a Chemistry test. She scored 55 out of 90 in a Physics test. In which test did Amelia score the highest percentage? You must show your workings.	Biology $\frac{38}{65} \times 100 = 58.46...\%$ Chemistry $\frac{40}{70} \times 100 = 57.1...\%$ Physics $\frac{55}{90} \times 100 = 61.1...\%$ Amelia scored the highest percentage in Physics.	(1) (1) (1) (1)

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