

You Are The Assessor | Level 1 maths

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How many marks would you award?

Keira wants to be an apprentice.
She wants to apply to the company that has the greatest number of apprentices.

Company A has 80 employees.
20% of the employees are apprentices.

Company B has 300 employees.
5% of the employees are apprentices.

(a) Which company has the greatest number of apprentices? (3)

$20\% \text{ of } 80 = 16$
 $10\% \text{ of } 16 = 8$
 $8 \times 2 = 16$
 $10\% \text{ of } 300 = 30$
 $30 \div 2 = 15$
 $5\% \text{ of } 30 = 15$

Company A 16

(b) Use a reverse calculation to show a check of your answer. (1)

$80 \div 10 = 8$
 $8 + 8 = 16$

16

Process to begin to work with percentage	1 or	A	$80 \div 10 \times 2 (=16)$ oe OR $300 \div 10 \div 2 (=15)$ oe OR $80 \div 10 (=8)$ and $300 \div 10 (=30)$
Full process to find figures to compare	2 or	AB	$80 \div 10 \times 2 (=16)$ oe and $300 \div 10 \div 2 (=15)$ oe
Valid decision with accurate figures	3	ABC	Company A AND 16 and 15
Valid check using a reverse calculation	1	D	e.g. $8 \times 10 = 80$

How many marks would you award?

- This learner would get three marks for this answer.
- They have correctly answered the first part of the question and have shown both a valid decision and accurate figures
- They have not been awarded the mark for the reverse calculation as the calculation they have provided is not a reverse calculation. Repeating a prior calculation is not an acceptable check.

Level 1 Functional Skills Maths | How many marks would you award?

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Company B has 300 employees.
5% of the employees are apprentices.

(a) Which company has the greatest number of apprentices? (3)

Handwritten solution:

20% of 80 = 16
 \downarrow
 $\frac{1}{5}$

10% of 80 = 8
 10% of 80 = $\frac{8}{16}$

5% of 300 = 3
 \downarrow
 $\frac{1}{100}$
 Company A has the greatest number of apprentices

Handwritten calculations:

$5 \overline{) 80} = 16$
 $5 \times 1 = 5$
 $5 \times 2 = 10$
 $5 \times 6 = 30$

$100 \overline{) 300} = 3$
 $100 \times 1 = 100$
 $100 \times 2 = 200$
 $100 \times 3 = 300$

Company A = 16

✓ (b) Use a reverse calculation to show a check of your answer. (1)

Handwritten solution:

$16 \times 1 = 16$ $16 \times 5 = 80$ $16 \overline{) 80}$
 $16 \times 2 = 32$
 $16 \times 3 = 48$
 $16 \times 4 = 64$
 $16 \times 5 = 80$

$16 \times 5 = 80$

Process to begin to work with percentage	1 or	A	$80 \div 10 \times 2 (=16)$ oe OR $300 \div 10 \div 2 (=15)$ oe OR $80 \div 10 (=8)$ and $300 \div 10 (=30)$
Full process to find figures to compare	2 or	AB	$80 \div 10 \times 2 (=16)$ oe and $300 \div 10 \div 2 (=15)$ oe
Valid decision with accurate figures	3	ABC	Company A AND 16 and 15
Valid check using a reverse calculation	1	D	e.g. $8 \times 10 = 80$

How many marks would you award?

- This learner would get two marks for this answer.
- They have correctly worked out the figure for company A with the correct method but have got the figure for company B wrong due to using an incorrect method. This means the maximum mark they can achieve on the first part of the question is one mark as they would need both methods to be correct to gain two marks. In the mark scheme the oe stands for or equivalent so a different, successful, method is acceptable.
- They have been awarded the mark for the reverse calculation as the calculation they have provided is a reverse calculation and therefore a valid check

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Company B has 300 employees.
5% of the employees are apprentices.

(a) Which company has the greatest number of apprentices? (3)

$80 \div 10 = 8 + 8$ 16 out of 80
 $300 \div 10 = 30 \div 2 = 15$ out of 300

Company A

(b) Use a reverse calculation to show a check of your answer. (1)

$30 \times 10 = 300$

Process to begin to work with percentage	1 or	A	$80 \div 10 \times 2 (=16)$ oe OR $300 \div 10 \div 2 (=15)$ oe OR $80 \div 10 (=8)$ and $300 \div 10 (=30)$
Full process to find figures to compare	2 or	AB	$80 \div 10 \times 2 (=16)$ oe and $300 \div 10 \div 2 (=15)$ oe
Valid decision with accurate figures	3	ABC	Company A AND 16 and 15
Valid check using a reverse calculation	1	D	e.g. $8 \times 10 = 80$

How many marks would you award?

- This learner would get four marks for this answer.
- They have got three marks for the first part of the question. They have a valid decision with the accurate figures to justify it.
- They have been awarded the mark for the reverse calculation as the calculation they have provided is a reverse calculation of what they did in the first part of the question.
- This is a model answer.

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Company B has 300 employees.
5% of the employees are apprentices.

(a) Which company has the greatest number of apprentices? (3)

20% of A is 4
5% of B is 60

$$\begin{array}{r} 20 \overline{) 80} \\ \underline{04} \\ 00 \end{array}$$

$$\begin{array}{r} 5 \overline{) 300} \\ \underline{060} \\ 000 \end{array}$$

B

(b) Use a reverse calculation to show a check of your answer. (1)

$$\begin{array}{r} 60 \\ \times 5 \\ \hline 300 \end{array}$$

60x5

Process to begin to work with percentage	1 or	A	80 ÷ 10 × 2 (=16) oe OR 300 ÷ 10 ÷ 2 (=15) oe OR 80 ÷ 10 (=8) and 300 ÷ 10 (=30)
Full process to find figures to compare	2 or	AB	80 ÷ 10 × 2 (=16) oe and 300 ÷ 10 ÷ 2 (=15) oe
Valid decision with accurate figures	3	ABC	Company A AND 16 and 15
Valid check using a reverse calculation	1	D	e.g. 8 × 10 = 80

How many marks would you award?

- This learner would get one mark for this answer.
- They have not got any marks for the first part of the question. They appear to have been confused as to how to work out percentages and have “found” 20% by dividing by 20 and 5% by dividing by 5.
- They have been awarded the mark for the reverse calculation as the calculation they have provided is a reverse calculation of what they did in the first part of the question. Follow through means they can be awarded the mark.

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Company B has 300 employees.
5% of the employees are apprentices.

(a) Which company has the greatest number of apprentices? (3)

Company A = 16
Company B = 15

∴ Company A

Company A

✓ (b) Use a reverse calculation to show a check of your answer. (1)

$15 \times 2 = 30$
 $30 \times 10 = 300$

Process to begin to work with percentage	1 or	A	$80 \div 10 \times 2 (=16)$ oe OR $300 \div 10 \div 2 (=15)$ oe OR $80 \div 10 (=8)$ and $300 \div 10 (=30)$
Full process to find figures to compare	2 or	AB	$80 \div 10 \times 2 (=16)$ oe and $300 \div 10 \div 2 (=15)$ oe
Valid decision with accurate figures	3	ABC	Company A AND 16 and 15
Valid check using a reverse calculation	1	D	e.g. $8 \times 10 = 80$

How many marks would you award?

- This learner would get three marks for this answer.
- They have got three marks for the first part of the question. Even though there is no working out, it is implied by the successful answer.
- They have not been awarded the mark for the reverse calculation. This is because they have not shown any working in the first part of the question. You cannot provide a check of your calculations if not calculations were originally seen.