

1. Number

Starter Quiz ·

AQA · GCSE · Mathematics

Name: _____ Score: _____

1. Find the HCF of 48 and 60.

2. Evaluate $2^3 \times 2^4$.

3. Find the lower bound of 3.4 rounded to the nearest 0.1.

4. Find $-12 + 35 - 9$.

5. Find $1\frac{1}{2} - \frac{3}{4}$.

6. The product rule assumes every pair is allowed.

☐ True ☐ False

7. 0.333333 is a finite decimal equal to $\frac{333333}{1000000}$.

☐ True ☐ False

8. $1\text{ m}^2 = 100\text{ cm} \times 100\text{ cm} = 10\,000\text{ cm}^2$, so multiply by 10 000.

☐ True ☐ False

9. Rounding a positive value and truncating it to the same decimal place give the same error interval.

☐ True ☐ False

10. A 2:5 ratio has 7 parts, so the first share is $\frac{2}{7}$ of the whole.

☐ True ☐ False

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Answers ·

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1. **12.0**

$48 = 2^4 \times 3$ and $60 = 2^2 \times 3 \times 5$. The shared smallest powers give $\text{HCF} = 2^2 \times 3 = 12$.

2. **128.0**

Same base: add indices. $2^3 \times 2^4 = 2^7 = 128$.

3. **3.35**

Half the rounding unit is 0.05. Lower bound = $3.4 - 0.05 = 3.35$.

4. **14.0**

$-12 + 35 = 23$, then $23 - 9 = 14$.

5. **0.75**

$\frac{6}{4} - \frac{3}{4} = \frac{3}{4} = 0.75$.

6. **True**

True. The product rule assumes every pair is allowed; forbidden combinations must be removed from the 12.

7. **True**

True. 0.333333 is a finite decimal equal to $\frac{333333}{1000000}$; one third is 0.333... repeating forever.

8. **True**

True. $1\text{ m}^2 = 100\text{ cm} \times 100\text{ cm} = 10\,000\text{ cm}^2$, so multiply by 10 000.

9. **False**

Rounding gives an interval on both sides of the value; truncation gives an interval on one side only.

10. **True**

True. A 2:5 ratio has 7 parts, so the first share is $\frac{2}{7}$ of the whole.