

QT Quick Test 4E - Which Answer?



Non calculator

The answers to all the questions are below. To make it a little more challenging, no units are given, and the answers are in the wrong order :-)

12	25	-61	67
400	350	45	20
57	1080	241	13
10	23	60000	25
7	120	147	63
960	5		

1. $\sqrt{64} + 7^2 =$

$$8 + 49 = 57$$

2. The mean of the following numbers:

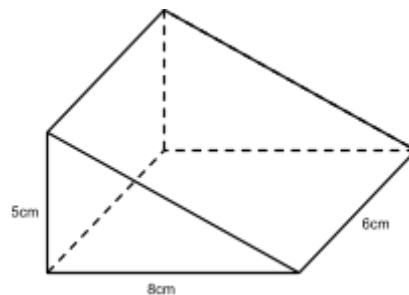
14, 3, 14, 10, 9

$$\begin{aligned} \text{Mean} &= \frac{\text{Total}}{\text{Number}} \\ &= \frac{14 + 3 + 14 + 10 + 9}{5} \\ &= 10 \end{aligned}$$

3. How many sides does a regular dodecagon have?

12 sides

4. Total volume of the prism



$$\begin{aligned} \text{Vol} &= \text{Area} \times \text{Depth} \\ &= \frac{1}{2}(5+8) \times 6 \\ &= 16 \end{aligned}$$

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5. 4. A circle has a diameter of 14cm.
Estimate the area of the circle.
Use the value of π as 3.

$$\begin{aligned} \text{Area} &= \pi r^2 \\ &= 3 \times (7)^2 \\ &= \underline{\underline{147}} \end{aligned}$$

$$6. 1\frac{5}{9} + 3\frac{24}{54} =$$

Give your answer as a whole number.

$$\begin{aligned} &1\frac{30}{54} + 3\frac{24}{54} \\ &4\frac{54}{54} = \underline{\underline{5}} \end{aligned}$$

$$7. 0.0004 \div 0.000016 =$$

$$\begin{aligned} &\frac{0.0004}{0.000016} = \frac{4000}{16} \\ &= 250 \\ &= \underline{\underline{25}} \end{aligned}$$

8. The first five terms of a sequence are

$$39 \quad 34 \quad 29 \quad 24 \quad 19 \quad 14$$

-5 -5 -5 -5

Find the value of the 20th term in the sequence.

$$\begin{aligned} \text{nth term} &= -5n + 39 \\ &= -5(20) + 39 \\ &= \underline{\underline{-61}} \end{aligned}$$

9. 5. Find the lowest common multiple (LCM) of 64 and 120.



10. Varsha is going on holiday to France. The exchange rate is £1 = €1.4. She changes £250 into Euros (€). Work out how many Euros Varsha receives. Give your answer to the nearest Euro.

$$\begin{aligned} &\text{£1} : \text{€1.4} \\ &250 \times 1.4 = \underline{\underline{€350}} \end{aligned}$$

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<p>11. Write down the size of angle x.</p>	<p>12. Work out the size of the exterior angle of a regular octagon.</p> $8 \overline{) 360}$ <p style="text-align: right;"><u>45</u></p> <p style="text-align: right;"><u>45°</u></p>
<p>13. Work out 134% of 180 to the nearest whole number.</p> $\begin{array}{r} 10\% = 18 \\ 1\% = 1.8 \\ 30\% = 54.0 \\ 4\% = 7.2 \\ \hline 61.2 \end{array}$ $\begin{array}{r} 180 \times \\ 61.2 \\ \hline 241.2 \\ \hline \underline{\underline{241}} \end{array}$	<p>14. Mr Smith wants to buy 108 packs of pens for his shop. Each pack costs £8.87 + VAT at 20%. Work out an estimate for the amount of money Mr Smith will spend on packs of pens.</p> <p>Pack = £9 + 20%</p> $\begin{array}{r} = 9.0 \\ 0.9 \times \\ \hline 0.9 \\ \hline 10.80 \end{array}$ <p>$10.80 \times 100 = \underline{\underline{£1080}}$</p>
<p>15. Govin buys an original painting for £800. He sells the painting for £1000. Calculate the percentage profit Govin makes when he sells the painting.</p> $\begin{aligned} \% \text{ Profit} &= \frac{\text{Diff}}{\text{Orig}} \\ &= \frac{200}{800} \times 100 \\ &= \underline{\underline{25}} \end{aligned}$	<p>16. Andy, Brian and Charlie share £750 in the ratio 2 : 5 : 8. Work out how much Charlie receives.</p> <p>A : B : C 2 : 5 : 8</p> <p>15) 750</p> <p>100 : 250 : 400</p> <p><u>400</u></p>

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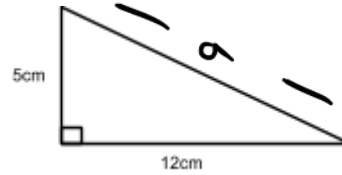


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17. 10 people take 8 days to paint a factory. How long will it take 4 people to do the same job?

$$\begin{aligned} 1 \text{ person} &= 80 \text{ days} \\ 4 \text{ people} &= \underline{\underline{20 \text{ days}}} \end{aligned}$$

18. Calculate the length of the hypotenuse in the following right angle triangle.



$$\begin{aligned} a^2 &= b^2 + c^2 \\ &= 25 + 144 \\ &= 169 \\ a &= \underline{\underline{13}} \end{aligned}$$

19. Convert $6m^2$ into cm^2

$$\begin{aligned} &1m \downarrow \boxed{6m^2} \quad 100 \boxed{cm} \\ &\leftarrow 6 \rightarrow \quad \quad \quad 600 \\ &100 \times 600 = \underline{\underline{60000}} \end{aligned}$$

20. Cas uses a scale of 1:200 to make a model of a rocket. The height of the rocket is 46m. Work out the height of the model. cm

$$\begin{aligned} &4600 \text{ cm} \\ &1 : 200 \\ &23 : 4600 \quad \times 23 \\ &\quad \quad \quad \underline{\underline{23}} \end{aligned}$$

21. The mean of nine numbers is 62. The mean of three of the numbers is 52. What is the mean of the other six numbers?

$$\text{Mean} = \frac{\text{Total}}{\text{Number}}$$

$$62 = \frac{\text{Total}}{9} \quad \Bigg| \quad 52 = \frac{\text{Total}}{3}$$

$$62 \times 9 = \text{Total} \quad \Bigg| \quad 156 = \text{Total}$$

$$\underline{558}$$

$$\text{Mean} = \frac{\text{Total}}{\text{Number}} = \frac{402}{6} = \underline{\underline{67}}$$

22. Work out the value of x in the equation

$$\begin{aligned} &5x + 3 = 38 \\ &-3 \quad \quad \quad -3 \\ &\hline &5x = 35 \\ &\div 5 \quad \quad \quad \div 5 \\ &\hline &x = \underline{\underline{7}} \end{aligned}$$