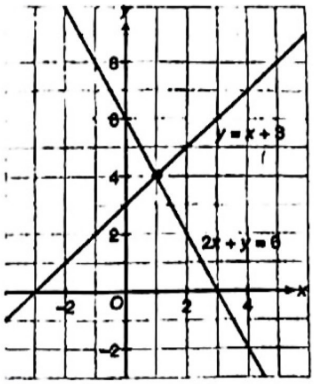
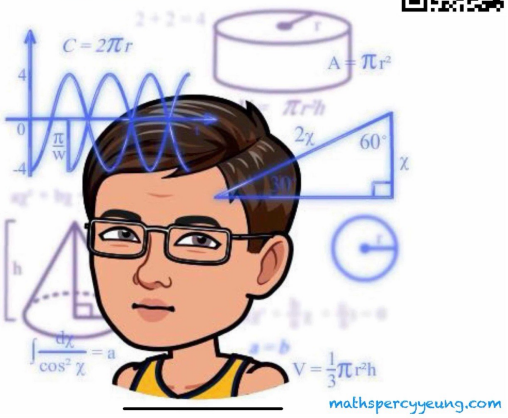
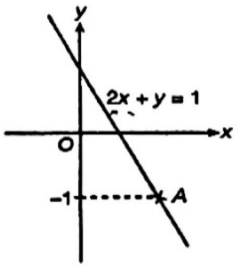
1. Solve the simultaneous equations $\begin{cases} y = x + 3 \\ 2x + y = 6 \end{cases}$ graphically.



A. (4, 1)
B. $x = 0.5$ and $y = 4$
C (1, 4)
D. No solution.



2. The figure shows the graph of $2x + y = 1$. Find the coordinates of A.



A. (−1, 2)
B (1, −1)
C. (2, −1)
D. (−1, 3)

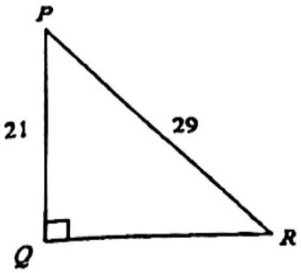
3. If $x = 1, y = 2$ is the common solution of $\begin{cases} ax + by - 2 = 0 \\ bx + ay + 2 = 0 \end{cases}$, then $a =$

A. 2. B −2. C. 1 D. −3.

4. The number of \$2 coins and \$5 coins in a cash box are x and y respectively. The total amount of the coins is \$300. It is given that the number of \$5 coins is 11 more than that of \$2 coins. Which of the following pairs of simultaneous equations show the relations between x and y?

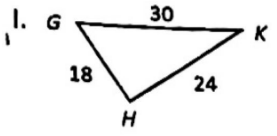
A. $\begin{cases} x + y = 300 \\ x = 11 + y \end{cases}$
B. $\begin{cases} x + y = 300 \\ y = 11 + x \end{cases}$
C. $\begin{cases} 2x + 5y = 300 \\ x = 11 + y \end{cases}$
D. $\begin{cases} 2x + 5y = 300 \\ y = 11 + x \end{cases}$

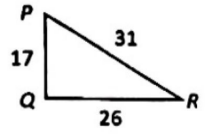
5. In the figure, $\triangle PQR$ is a right-angled triangle. If $PQ = 21$ and $PR = 29$, find QR.



A. $\sqrt{29^2 - 21^2}$
B. $\sqrt{29^2 + 21^2}$
C. $29^2 - 21^2$
D. $29^2 + 21^2$

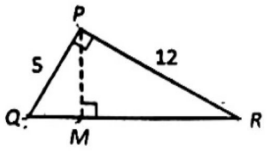
6. Which of the following is/are right-angled triangle(s)?

I. 

II 

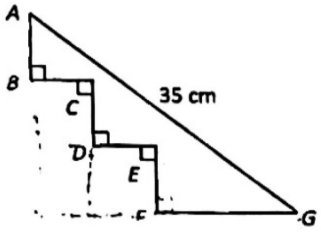
A. I only
B. II only
C. I and II
D. None of the above

7. In the figure, $\angle QPR = 90°$, $PQ = 5$ and $PR = 12$. M is a point on QR such that $PM \perp QR$. Find PM.



A. $\frac{60}{13}$ B. $\frac{60}{17}$
C. $\frac{30}{13}$ D. $\frac{30}{17}$

8. In the figure, $AB = BC = CD = DE = EF$, $FG = 2AB$ and $AG = 35$ cm. Find the perimeter of $ABCDEFG$.

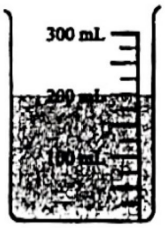


A. 70 cm
B. 75 cm
C. 78 cm
D. 84 cm

9. Kenny weighs 72 kg (correct to the nearest kg). Which of the following could be his actual weight?

A. 71.4 kg B. 71.5 kg C. 72.5 kg D. 72.6 kg

10. Garfield uses a beaker to measure the volume of a can of drink and the result is 200 mL. Find the percentage error of the measured value.



A. 66.7%
B. 12.5%
C. 6.25%
D. 4.17%

11. The width of a hall is 35 m (correct to the nearest m). Which of the following is the lower limit and the upper limit of the actual width of the hall?

	Lower limit	Upper limit
A.	34 m	36 m
B.	35.5 m	34.5 m
C.	34.95 m	35.05 m
D.	34.5 m	35.5 m

12. Which of the following has/have a maximum absolute error of 0.2?

I. measured value = 1.6, correct to the nearest 0.4

II. using a measuring tool with a scale interval of 0.2

III. measured value = 10, relative error = 0.02

A. I only B II only C. III only D. I and III only

13. The following table shows the measured values and the corresponding maximum absolute errors of four measurements P, Q, R and S.

Measurement	P	Q	R	S
Measured value	4860	8200	650	58
Maximum absolute error	20	50	5	0.5

Which measurement is the most accurate?

A. P B. Q C. R D. S

14. A bus travel 72 km in 2 hours. The speed of the bus is

A. 10 m/s. B 36 m/s. C. 600 m/s. D. 144 km/h.

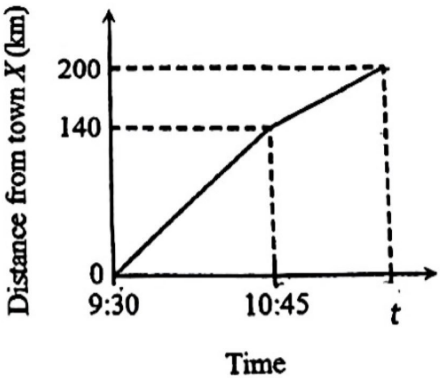
15. $\frac{3}{10} : \frac{1}{2} =$

A. 2 : 3 B. 3 : 5 C 5 : 6 D. 3 : 20

16. It is given that $a : b : c = 8 : 6 : 9$. If $a = 12$, find the value of c.

A. 9 B. 12 C. 13.5 D. 14.5

17. Town X and town Y are 200 km apart. The figure shows the graph for a car travelling on a straight road between town X and town Y in a morning.



If the speed of the car after 10:45 is 80 km/h, the average speed of the car during the whole journey is

A. 100 km/h. B. 112 km/h.

C. 125 km/h. D. 133 km/h.

18. Factorize $20n^2 - 8n$.

A. $4n(5n-1)$ B. $4n(5n-8)$ C. $4(5n-2)$ D $4n(5n-2)$

19. $3(a-2)^2 - 4ab + 8b =$

A $(a-2)(3a-4b-6)$. B. $(a-2)(3a+4b-6)$.

C. $12(a-2)(a-b-2)$. D. $12(a-2)(a+b-2)$.

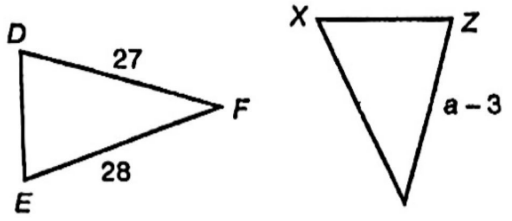
20. If $p = \frac{3}{2-q}$, then $q =$

A. $2p-3$. B. $\frac{2p-3}{p}$. C. $\frac{p}{2p-3}$. D. $\frac{3}{p}-2$.

21. Simplify $\frac{p}{9(2p-3q)} - \frac{q}{6(2p-3q)}$.

A. $\frac{1}{18}$ B. 18 C. $\frac{p-q}{18(2p-3q)}$ D. $\frac{p-q}{3(2p-3q)}$

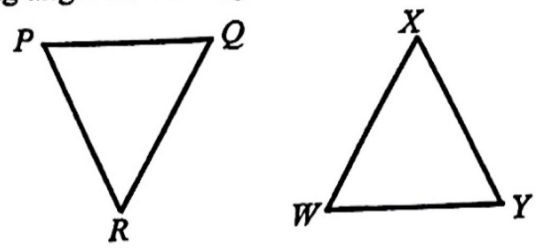
22. In the figure, $\Delta DEF \cong \Delta ZXY$. Find the value of a.



A. 24
B. 25
C 30
D. 31

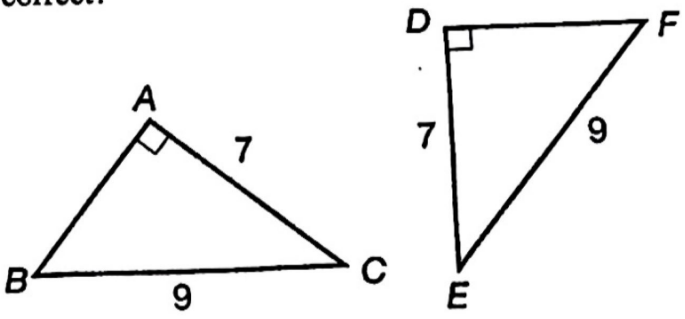
23. Given that $\Delta PQR \cong \Delta WYX$. The corresponding angle of $\angle PRQ$ is

A. $\angle WXY$.
B $\angle WYX$.
C. $\angle XWY$.
D. $\angle PQR$.

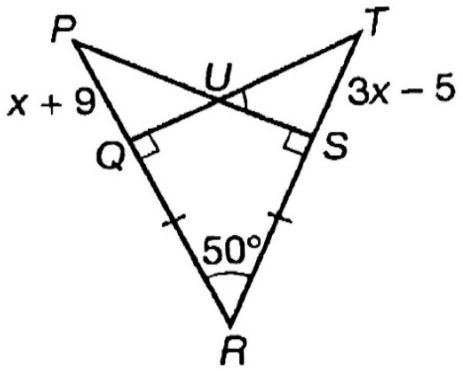


24. In the figure, which of the following is correct?

A. $\Delta ABC \cong \Delta DEF$ *(SSA)*
B. $\Delta ABC \cong \Delta DEF$ *(RHS)*
C. $\Delta ABC \cong \Delta DFE$ *(SSA)*
D. $\Delta ABC \cong \Delta DFE$ *(RHS)*



25. In the figure, $PS \perp RT$, $TQ \perp PR$ and $QR = SR$. PS and TQ intersect at U. $PQ = x + 9$, $TS = 3x - 5$ and $\angle PRT = 50°$. Which of the following are correct?



I. $\Delta PRS \cong \Delta TRQ$ (RHS)

II. $x = 7$

III. $\angle SUT = \angle PRT$

A. II only

B. I and II only

C. II and III only

D. I, II and III

~END OF PAPER~