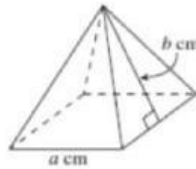


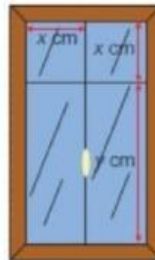
1. The diagram shows a right pyramid with a square base.
Rajah di bawah menunjukkan sebuah piramid tegak dengan tapak segi empat sama.



Given L is the total surface area of the pyramid. Find the value of a if $L = 192 \text{ cm}^2$ and $a = b$.
Diberi L ialah jumlah luas permukaan piramid. Cari nilai a jika $L = 192 \text{ cm}^2$ dan $a = b$.

- ☐ A 12
☐ B 10
☐ C 8
☐ D 6

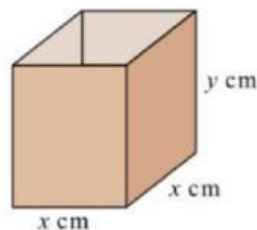
2. The diagram shows a window which is made of four pieces of glass.
Rajah di bawah menunjukkan sebidang cermin yang dibuat daripada 4 keping gelas.



Given L represents the total area, in cm^2 , of the four pieces of glass, which of the following algebraic expressions is correct?
Diberi L mewakili jumlah luas, dalam cm^2 , bagi empat keping gelas itu, antara ungkapan algebra berikut, yang manakah betul?

- ☐ A $L = 4x^2 + 2xy$
☐ B $L = 2x^2 + 4xy$
☐ C $L = 4x^2$
☐ D $L = 2x^2 + 2xy$

3. The diagram shows a box without a cover. The base is a square.
Rajah di bawah menunjukkan sebuah kotak tanpa penutup. Tapaknya berbentuk segi empat sama.



Given S is the total area, in cm^2 , of all the faces of the box. Find the value of y if $S = 448$ and $x = 8$.
Diberi S ialah jumlah luas, dalam cm^2 , semua permukaan kotak itu. Cari nilai y jika $S = 448$ dan $x = 8$.

- ☐ A 8
☐ B 12
☐ C 16
☐ D 18

4. If $7 - 3(2 - t) = r$, then $t =$
 Jika $7 - 3(2 - t) = r$, maka $t =$

- ☐ A $3r - 1$
☐ B $\frac{r - 1}{3}$
☐ C $3r + 1$
☐ D $\frac{r + 1}{3}$

5. A jar of v marbles consist of green marbles and yellow marbles. $y\%$ of the marbles are green marbles. Given the number of yellow marbles in the jar is x . Which of the following shows the number of yellow marbles in the jar?

Sebuah balang mengandungi v biji guli yang terdiri daripada guli hijau dan guli kuning. $y\%$ daripada guli itu ialah guli hijau. Diberi bilangan guli kuning di dalam balang itu ialah x . Antara berikut, yang manakah menunjukkan bilangan guli kuning di dalam balang itu?

- ☐ A $v - \frac{y}{100}$
☐ B $v - \frac{yv}{100}$
☐ C $vy - 100v$
☐ D $vy + 100v$

6. Given $5x = \frac{y}{5x}$, state x in terms of y .

Diberi $5x = \frac{y}{5x}$, nyatakan x dalam sebutan y .

- ☐ A $\sqrt{25y}$
☐ B $\frac{\sqrt{y}}{25}$
☐ C $\frac{\sqrt{y}}{5}$
☐ D $\sqrt{\frac{y}{5}}$

7. Which of the following pairings is correct?
 Antara padanan berikut, yang manakah betul?

- ☐ A
- | Formula
Rumus | Subject
Perkara rumus |
|--------------------------|--------------------------|
| $L = \frac{3K}{\pi w^2}$ | w |
- ☐ B
- | Formula
Rumus | Subject
Perkara rumus |
|---------------------|--------------------------|
| $\frac{1}{r} = 2st$ | r |
- ☐ C
- | Formula
Rumus | Subject
Perkara rumus |
|------------------|--------------------------|
| $m = 4t^2 - v$ | m |
- ☐ D
- | Formula
Rumus | Subject
Perkara rumus |
|---------------------|--------------------------|
| $\sqrt{p} = 2n - 7$ | p |

8. If $m = 2\sqrt{n}$, then $n =$
Jika $m = 2\sqrt{n}$, maka $n =$

- ☐ A $\frac{m}{4}$
☐ B $\frac{2m}{4}$
☐ C $\frac{m^2}{4}$
☐ D $\frac{m^2}{2}$

9. If $\frac{2y}{5} + 3 = p$, then $y =$
Jika $\frac{2y}{5} + 3 = p$, maka $y =$

- ☐ A $\frac{5(p-3)}{2}$
☐ B $\frac{5p-3}{2}$
☐ C $\frac{15-p}{2}$
☐ D $p - \frac{15}{2}$

10. Given $F = \frac{3k}{\sqrt{p}}$ if $F = 4$ and $p = 81$, then $k =$
Diberi $F = \frac{3k}{\sqrt{p}}$ jika $F = 4$ dan $p = 81$, maka $k =$

- ☐ A 36
☐ B 24
☐ C 12
☐ D 9

11. Given $y = x - 9$, express x as the subject of the formula.
Diberi $y = x - 9$, ungkapkan x sebagai perkara rumus.

- ☐ A $x = -9y$
☐ B $x = 9y$
☐ C $x = y - 9$
☐ D $x = y + 9$

12. The length of each side of a square is x cm. Which of the following is the algebraic formula for the perimeter, p , of the square?
Panjang sisi sebuah segi empat sama ialah x cm. Antara berikut, yang manakah ialah rumus algebra bagi perimeter, p , segi empat sama itu?

- ☐ A $p = 2x$
☐ B $p = x + 2$
☐ C $p = 4x$
☐ D $p = x + 4$

13. Given $c = \frac{5}{9}(F - 32)$, find the value of F if $c = 30$.

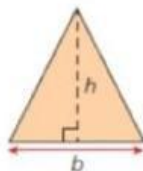
Diberi $c = \frac{5}{9}(F - 32)$, cari nilai F jika $c = 30$.

- ☐ A 12
☐ B 22
☐ C 76
☐ D 86

14. Given $z = 2x + 5y$, find the value of z when $x = 3$ and $y = 2$.
Diberi $z = 2x + 5y$, cari nilai z apabila $x = 3$ dan $y = 2$.

- ☐ A 10
☐ B 16
☐ C 24
☐ D 30

15.



Which of the following is the formula for the area, L , of the triangle?
Antara berikut, yang manakah ialah rumus bagi luas, L , segi tiga itu?

- ☐ A $L = 2bh$
☐ B $L = \frac{1}{2}bh$
☐ C $L = \frac{1}{4}bh$
☐ D $L = 4bh$

16. Given $V = \frac{2R}{R - k}$, express R in terms of V and k .

Diberi $V = \frac{2R}{R - k}$, ungkapkan R dalam sebutan V dan k .

- ☐ A $R = \frac{Vk - 2}{V}$
☐ B $R = \frac{k}{V - 2}$
☐ C $R = \frac{V - k}{2}$
☐ D $R = \frac{Vk}{V - 2}$

17. Given the algebraic formula $V = \pi r^2 t$, express r as the subject of the formula.
Diberi rumus algebra $V = \pi r^2 t$, ungkapkan r sebagai perkara rumus.



- ☐ A $r = \sqrt{\frac{V^2}{\pi t}}$
- ☐ B $r = \frac{V^2}{\pi t}$
- ☐ C $r = \sqrt{\frac{V}{\pi t}}$
- ☐ D $r = \frac{V}{\pi t}$

18. If $m = 3$ and $p = -2$, then $p(m^2 - 5p) =$
Jika $m = 3$ dan $p = -2$, maka $p(m^2 - 5p) =$

- ☐ A 8
- ☐ B 2
- ☐ C -2
- ☐ D -38

19. Given that $c = \frac{8}{a+5}$, then $a =$
Diberi bahawa $c = \frac{8}{a+5}$, maka $a =$

- ☐ A $\frac{8-5c}{c}$
- ☐ B $\frac{c}{8-5c}$
- ☐ C $5c+8$
- ☐ D $8-6c$

20. Given $z = 2x + 5y$, find the value of x when $z = 12$ and $y = 2$.
Diberi $z = 2x + 5y$, cari nilai x apabila $z = 12$ dan $y = 2$.

- ☐ A 1
- ☐ B 5
- ☐ C 12
- ☐ D 18