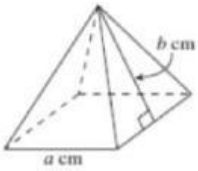
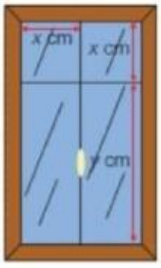
1. The diagram shows a right pyramid with a square base.
Rajah di bawah menunjukkan sebuah piramid tegak dengan tapak segi empat sama.



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

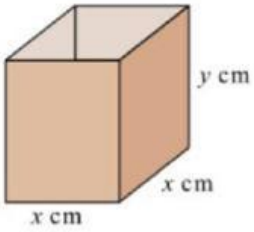
2. The diagram shows a window which is made of four pieces of glass.
Rajah di bawah menunjukkan sebidang cermin yang dibuat daripada 4 keping gelas.



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 $c = 30$.

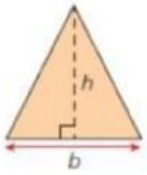
Diberi $c = \frac{5}{9}(F - 32)$, *cari nilai* F *jika* $c = 30$.

- 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