

1. Factorise completely:
Faktorkan selengkapnya:

$$x^2 + 4xy + 4y^2$$

- ☐ A $(x - y)(x + y)$
☐ B $(x - y)(x + 2y)$
☐ C $(x - 2y)^2$
☐ D $(x + 2y)^2$

2. Factorise:
Faktorkan:

$$mx + my - nx - ny$$

- ☐ A $(m - n)(x + y)^2$
☐ B $(m - n)(x + y)$
☐ C $(m - n)(x - y)$
☐ D $m(x - y) - n(x - y)$

3. Find one of the factors of:
Cari satu daripada faktor bagi:

$$6x^2 - 18x$$

- ☐ A $x - 3$
☐ B $1 - 3x$
☐ C $6x - 1$
☐ D $1 - 6x$

4. Factorise the following algebraic expression.
Faktorkan ungkapan algebra berikut.

$$3e^2 + e - 10$$

- ☐ A $(3e + 5)(e - 2)$
☐ B $e + 5$
☐ C $(3e - 5)(e + 2)$
☐ D $(5e + 2)(e - 3)$

5. $-5m(2m - n) + 3n(4m + 5n) =$

- ☐ A $10m^2 - 7mn + 12n^2$
☐ B $-10m^2 + 17mn + 15n^2$
☐ C $-10m^2 + 17mn - 12n^2$
☐ D $-10m^2 - 17mn + 15n^2$

6. When making a dress, a tailor spends m hours in cutting and n hours in sewing. Calculate the total number of hours taken to make p dresses.
Semasa membuat sehelai gaun, seorang tukang jahit menggunakan m jam untuk memotong kain dan n jam untuk menjahit. Hitung jumlah jam yang digunakan untuk membuat p helai gaun.

- ☐ A $m + np$
☐ B $mp + np$
☐ C $pm + n$
☐ D mnp

7. Expand:
Kembangkan:

$$(3x - 7y)^2$$



- ☐ A $9x^2 - 49y^2$
☐ B $9x^2 - 14y^2$
☐ C $9x^2 - 42xy + 49y^2$
☐ D $9x^2 - 21xy + 49y^2$

8. Given $m + r = 5$ and $p + q = 2$, find the value of $mp + rq + mq + rp$.
Diberi $m + r = 5$ dan $p + q = 2$, cari nilai bagi $mp + rq + mq + rp$.

- ☐ A 1
☐ B 3
☐ C 7
☐ D 10

9. Factorise:
Faktorkan:

$$4d^2 - 8df - 5de + 10ef$$

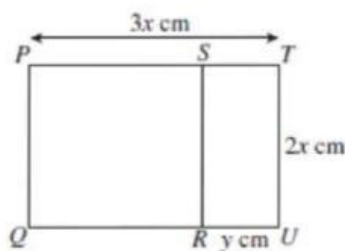
- ☐ A $(4d - 2f)(d + 5e)$
☐ B $(4d - 2f)(d - 5e)$
☐ C $(d + 2f)(4d - 5e)$
☐ D $(d - 2f)(4d - 5e)$

10. Simplify:
Permudahkan:

$$\frac{m^2 - 16n^2}{8mn + 2m^2} \div \frac{3m - 12n}{8m^2}$$

- ☐ A $\frac{4m^2}{3}$
☐ B $\frac{4m}{3}$
☐ C $\frac{m - n}{3}$
☐ D $\frac{4m + n}{3mn}$

11. The diagram shows algebraic tiles PQRS and SRUT.
Rajah di bawah menunjukkan jubin algebra PQRS dan SRUT.



Which of the following is the algebraic expression for the area of PQRS?
Antara berikut, yang manakah ungkapan algebra bagi luas PQRS?

- ☐ A $(6x^2 - 2xy) \text{ cm}^2$
☐ B $(6x - 2xy) \text{ cm}^2$
☐ C $(3x - 2xy) \text{ cm}^2$
☐ D $(3x^2 - 2xy) \text{ cm}^2$

12. Factorise completely:
Faktorkan selengkapnya:

$$3x^2 - 48$$

- ☐ A $3(x - 4)^2$
☐ B $3(x + 2)(x - 4)$
☐ C $3(x + 4)(x - 4)$
☐ D $3(x + 4)(x - 8)$

13. $(6 - p)(5 + 2p) =$

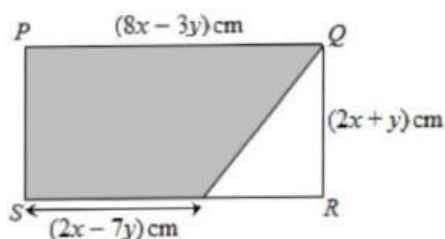
- ☐ A $30 - 5p - 12p^2$
☐ B $30 - 3p - 2p^2$
☐ C $30 + 7p - 2p^2$
☐ D $30 + 12p - 2p^2$

14. Express $\frac{6}{mp} + \frac{p}{3m}$ as a single fraction in the lowest terms.

Ungkapkan $\frac{6}{mp} + \frac{p}{3m}$ sebagai pecahan tunggal dalam sebutan terendah.

- ☐ A $\frac{3}{3mp}$
☐ B $\frac{19}{3mp}$
☐ C $\frac{3 + p^2}{3mp}$
☐ D $\frac{18 + p^2}{3mp}$

15. In the diagram, PQRS is a rectangle.
Dalam rajah di bawah, PQRS ialah sebuah segi empat tepat.



Find the area, in cm^2 , of the shaded region.
Cari luas, dalam cm^2 , bagi kawasan berlorek.

- ☐ A $20x^2 - 10xy - 10y^2$
☐ B $10x^2 - 5y - 5y^2$
☐ C $10x^2 - 5xy - 5y^2$
☐ D $10x^2 - 10xy - 10y^2$

16. Factorise completely:
Faktorkan selengkapnya:

$$m^2 + 7(1 - m) - (m - 9)$$

- ☐ A $(m + 4)(m - 4)$
☐ B $(m + 4)(m - 5)$
☐ C $(m + 4)^2$
☐ D $(m - 4)^2$

17. $\left(-2\frac{1}{2}\right)(8pq - 6p^2) =$

- ☐ A $-8pq + 6p^2$
☐ B $-20pq - 6p^2$
☐ C $-20pq - 15p^2$
☐ D $-20pq + 15p^2$

18. Factorise the following algebraic expression.
Faktorkan ungkapan algebra berikut.

$$n^2 - 9$$

- ☐ A $(n + 1)(n - 3)$
☐ B $(n + 1)(n - 9)$
☐ C $(n - 3)(n + 3)$
☐ D $(n - 1)(n + 9)$

19.

Express $\frac{5}{m-2} - \frac{1-2m}{m}$ as a single fraction in its simplest form.

Ungkapkan $\frac{5}{m-2} - \frac{1-2m}{m}$ sebagai satu pecahan tunggal dalam bentuk termudah.

- ☐ A $\frac{2(1+m^2)}{m(m-2)}$
- ☐ B $\frac{1+m^2}{m(m-2)}$
- ☐ C $\frac{1-m^2}{m(m-2)}$
- ☐ D $\frac{2+m^2}{m(m-2)}$

20.

Expand the following expression:

Kembangkan ungkapan yang berikut:

$$(x+2y)(3x-4y)$$

- ☐ A $3x^2 - 10xy - 8y^2$
- ☐ B $3x^2 - 2xy - 8y^2$
- ☐ C $3x^2 + 2xy - 8y^2$
- ☐ D $3x^2 + 10xy - 8y^2$