

Year 9 Class 3 questions

Q1

Expand and simplify $3(2a+8)+12$.

- $6a+20$
- $18a+24$
- $6a+36$
- $26a$

Q2

Expand and simplify $(c+3)(c-4)$.

- c^2+c-12
- $c^2+7c+12$
- c^2-c-12

Q3

Expand and simplify $(4m-3)(3m+1)$.

- $12m^2-9m-3$
- $12m^2-15m+3$
- $12m^2-5m-3$
- $12m^2-13m+3$

Q4

Expand and simplify $(x-y)(x+y)$.

- x^2-y^2
- x^2+y^2
- x^2-xy-y^2

Q5

Factorise:

$$5m^2 + 2m = \boxed{} (5m + 2)$$

m

Q6

Expand and simplify $2c-2(3-c)$.

- $3c-6$
- $-2c$
- $4c-6$
- -6

Q7

Expand and simplify $14d-5(d-3)$.

- $24d$
- $9d+15$
- $19d+15$
- $9d+3$

Q8

Expand and simplify $(x-6)(x-2)$.

- $x^2+8x+12$
- $x^2-8x+12$
- $x^2+8x-12$

Q9

Expand and simplify:

$$(x-y)(x+3y) = x^2 + \boxed{} xy - \boxed{} y^2$$

$ \quad \quad \quad 2 \quad \quad \quad 3$

Q10

Expand and simplify $(12x^2-1)(x+3)$.

- $12x^3+36x^2+x+3$
- $12x^3+12x^2-3x-3$
- $12x^3+36x^2-x-3$
- $12x^3+12x^2+13x-13$

Q11

Expand and simplify $(5x^2 - 5)(3x^2 + 5)$.

- $15x^4 + 10x^2 - 25$ $15x^4 + 25x^2 - 10$
 $15x^4 - 10x^2 + 25$ $10x^4 - 15x^2 - 25$

Q12

Expand and simplify $(7m + 10n)(7m - 10n)$.

- $49m^2 + 14mn - 120n^2$
 $49m^2 - 100n^2$
 $49m^2 + 140mn + 100n^2$

Q13

Expand and simplify:

$$(3m + 2x)(2x - 3m) = \boxed{4}x^2 - \boxed{9}m^2$$

Q14

Factorise:

$$-8x - 12 = \boxed{-4}(2x + 3)$$

Q15

Factorise fully $8y - 32a$.

- $8(y - 4a)$
 $8y(y - 4a)$
 $8(4y - 4a)$

Q16

Expand and simplify $5p + 2p(p + 3)$.

- $5p + 8p^2$
 $2p^2 + 11p$
 $13p^2$
 $2p^2 + 8p$

Q17

Expand and simplify $5(x + 2) + 4(x + 6)$.

- $17x$
 $9x + 34$
 $9x + 8$
 $9x + 16$

Q18

Expand and simplify $4(x - 2) + 2x(3x - 2)$.

- $13x^3$
 $8x + 5x^2$
 $6x^2 - 8$
 $10x^3 + 2x$

Q19

Expand and simplify $(a - b)(a + 2b)$.

- $a^2 + ab - 2b^2$
 $a^2 - ab + 2b^2$
 $a^2 + 2ab - 2b^2$

Q20

Expand and simplify $(x + y)(2x - y)$.

- $2x^2 + xy - y^2$
 $2x^2 + 3xy + y^2$
 $2x^2 - 3xy + y^2$

Q21

Expand and simplify $(x+2y)(x-2y)$.

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

Q22

Expand and simplify $(9xy - 2p)(2xy + 3p)$.

- $18x^2y^2 + 25pxy + 6p^2$
 $18x^2y^2 - 23pxy - 4p^2$
 $20x^2y^2 + 18pxy - 6p^2$
 $18x^2y^2 + 23pxy - 6p^2$

Q23

Expand and simplify $(4x^2 + 3)(3x - 1)$.

- $12x^3 + 2x^2 - 9x + 5$
 $12x^3 - 4x^2 + 9x - 3$
 $10x^3 - 9x^2 + 4x - 3$
 $12x^3 + 4x^2 - 8x - 2$

Q24

Expand and simplify $(10m^2 - 2)(m^2 - 7)$.

- $20m^4 + 72m^2 - 14$
 $10m^4 + 70m^2 + 14$
 $10m^4 + 72m^2 - 10$
 $10m^4 - 72m^2 + 14$

Q25

Expand and simplify $(6 + v^3)(6 - v^3)$.

- $36 - v^6$
 $36 + v^6$
 $36 - 2v^3$

Q26

Expand and simplify $(3a - 6x)(3a + 6x)$.

- $9a^2 - 36ax + 36x^2$
 $36a^2 - 9x^2$
 $9a^2 - 36x^2$

Q27

Expand and simplify $\left(1 - \frac{x}{2}\right)\left(1 + \frac{x}{2}\right)$.

- $1 - \frac{x^2}{4}$
 $\frac{x^2}{4} - 1$
 $1 + \frac{x^2}{4}$

Q28

Factorise fully $5x^3 - 10x^2$.

- $5x^2(x - 2)$
 $x^2(5x - 8)$
 $2x^2(2x - 5)$

Q29

Factorise fully $-2a - 4ab$.

- $-2a(1 + 2b)$
 $-2a(b + 1)$
 $-a(4b + 1)$

Q30

Factorise fully $-6 - 14a$.

- $-6(2a + 1)$
 $-(14a + 5)$
 $-2(3 + 7a)$