

Factorising, Simplifying and Indices

1. (a) Simplify the expression

$$2c + 6d + 4c - 8c$$

.....
.....

Answer

(2)

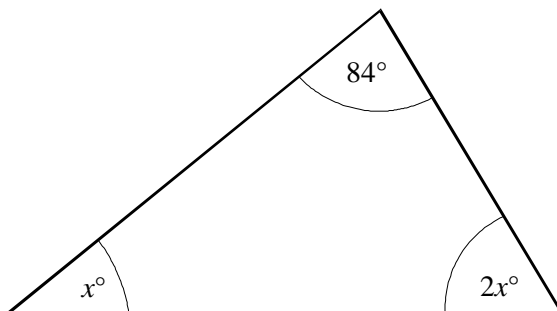
- (b) Factorise $x^2 + 5x$

.....
.....

Answer

(2)

- (c) The triangle has angles x° , $2x^\circ$ and 84° as shown.
Find the value of x .



Not drawn accurately

.....
.....
.....
.....

Answer degrees

(3)

(Total 7 marks)

2. (a) Factorise $3x - 6$

.....

Answer

(1)

- (b) Factorise $x^2 - 2x$

Answer

(2)

(Total 3 marks)

3. (a) Factorise $4x - 12$

.....

Answer

(1)

(b) Factorise $x^2 - 5x$

.....

Answer

(1)

(Total 2 marks)

4. Factorise

(a) $4x - 8$

.....

Answer.....

(1)

(b) $y^2 + 2y$

.....

Answer.....

(2)

(Total 3 marks)

5. (a) Expand $d(d^2 + 6)$

.....

Answer

(2)

(b) Simplify $g^4 \times g^4$

.....

Answer

(1)

(c) Expand and simplify $2(p + 5) + 3(2p - 1)$

.....

.....

.....

Answer

(2)

(Total 5 marks)

6. (a) Factorise completely $12y^2 - 8y$

.....
.....

Answer

(2)

(b) Simplify $(2xy^2)^3$

.....
.....

Answer

(2)

(Total 4 marks)

7. (a) Multiply out and simplify $4(x - 2) + 3(x + 2)$

.....
.....

Answer

(2)

(b) Factorise completely the following expressions

(i) $2a^2 + a$

.....
.....

Answer

(1)

(ii) $8x^3y^2 - 4xy^3$

.....
.....

Answer

(2)

(Total 5 marks)

8. (a) Factorise $2x + 6$

.....
.....

Answer.....

(1)

(b) Expand $3(4y + 1)$

.....
.....

Answer.....

(1)

(c) Expand $4x(x^2 + 5)$

.....
.....

Answer.....

(2)

(Total 4 marks)

9. Simplify

(a) $m^2 \times m^5$

.....

Answer

(1)

(b) $p^6 \div p^3$

.....

Answer

(1)

(c) $(q^4)^2$

.....

Answer

(1)

(Total 3 marks)

10. (a) Factorise $10p - 4$

.....

Answer

(1)

(b) Factorise $q^2 + 3q$

.....

Answer

(1)

(c) Factorise $r^2 - r$

.....

Answer (1)

(d) Simplify $t^2 \times t^3$

.....

Answer (1)
(Total 4 marks)

11. (a) Simplify

$$4x - 5x + 7x$$

.....

Answer (1)

(b) Simplify

(i) $x^5 \times x^{-2}$

.....

Answer (1)

(ii) $y^5 \div y^{-2}$

.....

Answer (1)
(Total 3 marks)

12. (i) Factorise completely $2a^2 - a$

.....

Answer (2)

(ii) Find the value of $2a^2 - a$ when $a = -4.5$

.....

Answer (2)

(c) Simplify

(i) $x^5 \times x^{-2}$

.....

Answer (1)

(ii) $y^5 \div y^{-2}$

.....
.....

Answer

(1)

(Total 9 marks)

13. (a) Simplify $2x + 3y + 5x - 2y - 4x$

.....

Answer

(2)

(b) Factorise $4c + 12$

.....

Answer

(1)

(c) Factorise $x^2 + 5x$

.....

Answer

(2)

(Total 5 marks)

14. Simplify

(a) $w^6 \times w^2$

.....

Answer

(1)

(b) $x^3 \div x^5$

.....

Answer

(1)

(c) $(y^3)^2$

.....

Answer

(1)

(Total 3 marks)