Corbett maths

Factorisation
Video 117 on www.corbettmaths.com

Examples

Workout

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Question 1: Factorise the following expressions

(a) $4x + 6$ (b) $15x + 20$ (c) $9y - 12$ (d) $5x + 15$

(e) $6x - 3$ (f) $4x + 8$ (g) $5y - 25$ (h) $8w + 24$

(i) $10y + 15$ (j) $14w + 21$ (k) $20y - 30$ (l) $27x + 18$

(m) $6 - 4x$ (n) $9 + 12y$ (o) $45 + 60x$ (p) $16y - 32$

(q) $22a + 55$ (r) $100 - 40y$ (s) $6x + 9y$ (t) $4w - 2a$

(u) $25y - 35z$ (v) $8x^2 + 20$ (w) $30y^3 - 15$ (x) $42y + 28x - 56c$

Question 2: Factorise the following expressions

(a) $x^2 + 7x$ (b) $x^2 - 3x$ (c) $y^2 + y$ (d) $w^2 + 9w$

(e) $x^2 - 7x$ (f) $4w^2 + 10w$ (g) $6x^2 - 8x$ (h) $9y^2 - 6y$

(i) $10c + c^2$ (j) $5g - g^2$ (k) $14x^2 + 35x$ (l) $40x^2 - 50x$

(m) $12x^2 + 18x$ (n) $24x^2 - 18x$ (o) $45y^2 + 60y$ (p) $7w^2 + 2w$

Question 3: Factorise the following expressions

(a) $x^2 + xy$ (b) $a^2 - ab$ (c) $xy + xz$ (d) $ab + ac - ad$

(e) $6c^2 - 4cd$ (f) $10x^2 + 15xy$ (g) $12ab + 18bc$ (h) $8xy + 4y^2$

(i) $8cdf + 10cde$ (j) $7w^2 + 6w + wy$ (k) $8ab^2 - 10ab$ (l) $4xy^2 + 6xy + 2x^2y$

(m) $6mn - 7m^2n$ (n) $11g^2h + 22h^2$

Question 4: Factorise the following expressions

(a) $x^3 + 2x^2$ (b) $5x^3 - x^2$ (c) $8c^3 + 12c$ (d) $10w^2 - 15w^3$

(e) $32y^3 + 24y^2$ (f) $12x^4 + 15x$ (g) $4a^5 - 12a^2$ (h) $8w^9 + w^7$

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Apply

Question 1: Explain why 8x + 3y cannot be factorised.

Question 2: James has factorised an expression correctly.
His answer is 2(7y – 3).
What was the expression that he factorised?

Question 3: Alexandra is trying to factorise fully 15y + 30.
Rebecca says the answer is 3(5y + 10)
Victoria says the answer is 5(3y + 6)
Alexandra says both Rebecca and Victoria are incorrect, why?

Question 4: Can you spot any mistakes?

Factorise

$w^2 - 5w$

$w(w + 5)$

.....

(1)

Question 5: Can you spot any mistakes?

Factorise completely

$24x^2 + 20x$

$4(6x^2 + 5x)$

.....

(2)

Question 6: Can you spot any mistakes?

Factorise completely

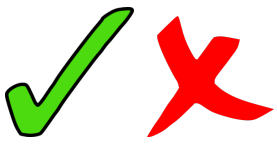
$20a^2c + 30ac$

$5ac(4a^2 + 6)$

.....

(2)

Answers



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