

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) $8w^9 + w^7$

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

$$w^2 - 5w$$

$$\frac{w(w + 5)}{\dots\dots\dots}$$

(1)

Question 5: Can you spot any mistakes?

Factorise completely

$$24x^2 + 20x$$

$$\frac{4(6x^2 + 5x)}{\dots\dots\dots}$$

(2)

Question 6: Can you spot any mistakes?

Factorise completely

$$20a^2c + 30ac$$

$$\frac{5ac(4a^2 + 6)}{\dots\dots\dots}$$

(2)

Answers



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