

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

$$w^2 - 5w$$

$$w(w + 5)$$

(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

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

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