

Answers: Introduction to factorization

Millie Pike

Summary

Answers to questions relating to the guide on introduction to factorisation.

*These are the answers to **Questions: introduction to factorisation**.*

Please attempt the questions before reading these answers!

Q1

1.1. $7(x + 5)$.

1.2. $3(x - 17)$.

1.3. $3(2m + n)$.

1.4. $5(f + 2 + 3k)$.

1.5. $2(5x - 1) + y(3y + 3)$.

1.6. $3x(3y - 1)$.

1.7. $a(a + b)$.

1.8. $4m(m - 2n + 3)$.

1.9. $4wx(3x + 4)$.

1.10. $ab(a^2 + b(1 + b))$.

1.11. $(x - 6)(x - 3)$.

1.12. $(w + z)(3 + x)$.

1.13. $(2a + b)(b - 1)$.

1.14. $(b + 3)(a(a + 1) - 2)$.

Q2

2.1. $(x + 5)(x + 1)$.

2.2. $(x - 4)(x + 1)$.

- 2.3. $(x - 3)(x - 1)$.
2.4. $(2x - 7)(x - 3)$.
2.5. $5(x - 1)(x - 1)$.
2.6. $(x - 3y)(x + 2y)$.
2.7. $4y^2(3x - 1)(x + 1)$.
2.8. $(x - 4y)(x - 1)$.
2.9. $(x - y)^2$ or $(y - x)^2$.
2.10. $(x - y)(x + y)$.

Q3

- 3.1. You worked out in 1.1 that $7x + 35 = 7(x + 5)$. Solving for x gives $x = -5$.
3.2. You worked out in 1.11 that $x(x - 6) + 3(6 - x) = (x - 6)(x - 3)$. Solving for x gives $x = 3$ and $x = 6$.
3.3. You worked out in 2.3 that $x^2 - 4x + 3 = (x - 3)(x - 1)$. Solving for x gives $x = 3$ and $x = 1$.
3.4. You worked out in 2.7 that $12x^2y^2 + 8xy^2 - 4y^2 = 4y^2(3x - 1)(x + 1)$. Solving for x gives $x = \frac{1}{3}$ and $x = -1$.
3.5. You worked out in 2.8 that $x^2 - 4yx - x + 4y = (x - 4y)(x - 1)$. Solving for x gives $x = 4y$ and $x = 1$.
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v1.0: initial version created 04/25 by Millie Pike

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