Questions: Introduction to factorization

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Summary

A selection of questions for the study guide on introduction to factorization.

Before attempting these questions, it is highly recommended that you read [Guide: Introduction to factorization](please add link).

Q1

Express each of the following expressions in their simplest factorized form.

1.1. $7x + 35$.

1.2. $3x - 51$.

1.3. $6m + 3n$.

1.4. $5f + 10 + 15k$.

1.5. $10x - 2 + 3y^2 + 3y$.

1.6. $9xy - 3x$.

1.7. $a^2 + ab$.

1.8. $4m^2 - 8nm + 12m$.

1.9. $12wx^2 + 16wx$.

1.10. $a^3b + ab^2 + ab^3$.

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

1.12. $3w + 3z + xw + xz$.

1.13. $2ab + b^2 - b - 2a$.

1.14. $a^2b + 3a^2 + ab + 3a - 2b - 6$.

Q2

Express each of the following expressions in their simplest factorized form.

2.1. $x^2 + 6x + 5$.

2.2. $x^2 - 3x - 4$.

2.3. $x^2 - 4x + 3$.

2.4. $2x^2 - 13x + 21$.

2.5. $5x^2 - 10x + 5$.

2.6. $x^2 - xy - 6y^2$.

2.7. $12x^2y^2 + 8xy^2 - 4y^2$.

2.8. $x^2 - 4yx - x + 4y$.

2.9. $x^2 + y^2 - 2xy$.

2.10. $x^2 - y^2$.

Q3

Using your workings from Q1 and Q2 , solve the following expressions for x.

3.1. $7x + 35 = 0$.

3.2. $x(x - 6) + 3(6 - x) = 0$.

3.3. $x^2 - 4x + 3 = 0$.

3.4. $12x^2y^2 + 8xy^2 - 4y^2 = 0$.

3.5. $x^2 - 4yx - x + 4y = 0$.

After attempting the questions above, please click this link to find the answers.

Version history and licensing

v1.0: initial version created 04/25 by Millie Pike.