

To factor a polynomial means to represent a polynomial as a **multiplication of polynomials**.

- Factoring a polynomial is the reverse of multiplying polynomials.

Factoring $1x^2 + bx + c$

$$x^2 + \underbrace{8}_{3+5}x + \underbrace{15}_{3 \cdot 5} = (x + 3)(x + 5)$$

1.) $m^2 - 11m + 18$

Check

a = ___ b = ___ c = ___

2.) $n^2 + 5n + 6$

Check

a = ___ b = ___ c = ___

3.) $w^2 + w - 6$

Check

a = ___ b = ___ c = ___

4.) $n^2 + n - 12$

Check

a = ___ b = ___ c = ___

Factoring $1x^2 + bx + c$

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To factor a polynomial means to represent a polynomial as a **multiplication of polynomials**.

- Factoring a polynomial is the reverse of multiplying polynomials.

5.) $k^2 + 5k - 8$

Check

a = ___ b = ___ c = ___

6.) $n^2 + 6n + 10$

Check

a = ___ b = ___ c = ___

7.) $m^2 - 25$

Check

a = ___ b = ___ c = ___

8.) $y^2 - 9$

Check

a = ___ b = ___ c = ___

Solving Math Problems

- 1 Determine what the question is asking.**
- 2 Determine the math concept required.**
- 3 Determine relevant information.**
- 4 Solve the problem, then interpret the answer.**
- 5 Check the reasonableness of your answer.**

Factoring $1x^2 + bx + c$

$$x^2 + 8x + 15 = (x + 3)(x + 5)$$

$\underbrace{\quad\quad}_{3+5}$ $\underbrace{\quad\quad}_{3 \cdot 5}$

Identify all the quadratic polynomials that are not factorable. Explain.

$$x^2 - 17x + 30$$

$$h^2 + 13h + 15$$

$$w^2 - 7w - 12$$

$$k^2 + 7k + 12$$

$$n^2 - 3n - 40$$

$$m^2 - 2m - 8$$

CFU

- 1** How did I/you determine what the question is asking?
- 2** How did I/you determine the math concept required?
- 3** How did I/you determine the relevant information?
- 4** How did I/you solve and interpret the problem?
- 5** How did I/you check the reasonableness of the answer?

To factor a polynomial means to represent a polynomial as a multiplication of polynomials.

Factoring a polynomial is the reverse of multiplying polynomials.

Factoring $1x^2 + bx + c$

$x^2 + 8x + 15 = (x + 3)(x + 5)$
3 + 5 3 • 5

1.) $x^2 + 6x + 9$
a = ___ b = ___ c = ___
Check

2.) $m^2 - 8m + 12$
a = ___ b = ___ c = ___
Check

3.) $m^2 - 5m - 6$
a = ___ b = ___ c = ___
Check

4.) $n^2 + 8n - 9$
a = ___ b = ___ c = ___
Check

5.) $k^2 + 10k - 14$
a = ___ b = ___ c = ___
Check

6.) $n^2 + 9n + 21$
a = ___ b = ___ c = ___
Check

7.) $m^2 - 4$
a = ___ b = ___ c = ___
Check

8.) $y^2 - 49$
a = ___ b = ___ c = ___
Check

Solving Math Problems

- 1 Determine what the question is asking.**
- 2 Determine the math concept required.**
- 3 Determine relevant information.**
- 4 Solve the problem, then interpret the answer.**
- 5 Check the reasonableness of your answer.**

Factoring $1x^2 + bx + c$

$$x^2 + \underbrace{8}_{3+5}x + \underbrace{15}_{3 \cdot 5} = (x + 3)(x + 5)$$

Identify all the quadratic polynomials that are not factorable. Explain.

$$x^2 - 20x - 21$$

$$h^2 - 11h + 30$$

$$w^2 + 16w + 15$$

$$k^2 - 7k + 8$$

$$n^2 - 13n - 40$$

$$m^2 + m - 12$$