

Algebra

9.6 Review

Name: _____

Period: _____ **#:** _____

Factor each trinomial.

1. $2x^2 + 11x - 21$

2. $2x^2 - 7x - 21$

3. $2x^2 + 3x - 20$

4. $36x^2 + 12x + 1$

5. $3x^2 - 14x - 24$

6. $4x^2 - 20x + 25$

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7. $3x^2 + 8x - 35$

8. $6x^2 - 13x - 15$

9. $2x^2 - 25x + 50$

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10. $3x^2 - 29x + 40$

11. $6x^2 + 26x + 24$

12. $24x^2 + 10x - 6$

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13. $10x^2 - 4x - 14$

14. $66x^2 - 57x + 12$

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Answer Key:

1. $2x^2 + 11x - 21$

$$= \underline{(2x - 3)(x + 7)}$$

2. $2x^2 - x - 21$

$$= \underline{(2x - 7)(x + 3)}$$

3. $2x^2 + 3x - 20$

$$= \underline{(2x - 5)(x + 4)}$$

4. $36x^2 + 12x + 1$

$$= (6x + 1)(6x + 1) = \underline{(6x + 1)^2}$$

$36x^2 + 12x + 1$ is a perfect square trinomial!

5. $3x^2 - 14x - 24$

$$= \underline{(3x + 4)(x - 6)}$$

6. $4x^2 - 20x + 25$

$$= (2x - 5)(2x - 5) = \underline{(2x - 5)^2}$$

$4x^2 - 20x + 25$ is a perfect square trinomial!

7. $3x^2 + 8x - 35$

$$= \underline{(3x - 7)(x + 5)}$$

8. $6x^2 - 13x - 15$

$$= \underline{(6x + 5)(x - 3)}$$

9. $2x^2 - 25x + 50$

$$= \underline{(2x - 5)(x - 10)}$$

10. $3x^2 - 29x + 40$

$$= \underline{(3x - 5)(x - 8)}$$

11. $6x^2 + 26x + 24 \leftarrow \text{GCF} = 2$

$$= 2(3x^2 + 13x + 12)$$

$$= \underline{2(3x + 4)(x + 3)}$$

12. $24x^2 + 10x - 6 \leftarrow \text{GCF} = 2$

$$= 2(12x^2 + 5x - 3)$$

$$= \underline{2(4x + 3)(3x - 1)}$$

13. $10x^2 - 4x - 14 \leftarrow \text{GCF} = 2$

$$= 2(5x^2 - 2x - 7)$$

$$= \underline{2(5x - 7)(x + 1)}$$

14. $66x^2 - 57x + 12 \leftarrow \text{GCF} = 3$

$$= 3(22x^2 - 19x + 4)$$

$$= \underline{3(11x - 4)(2x - 1)}$$