

NAME _____ DATE _____ PERIOD _____

Factoring Trinomials – Day 1

Factor each trinomial and write your answer in the answer blank. |

1. $b^2 + 7b + 12$ _____

2. $m^2 + 14m + 40$ _____

3. $z^2 + 5z - 24$ _____

4. $t^2 - 2t - 35$ _____

5. $s^2 + 3s - 18$ _____

6. $2x^2 + x - 21$ _____

7. $2x^2 - 5x - 12$ _____

8. $7a^2 + 22a + 3$ _____

9. $3c^2 - 2c - 5$ _____

10. $4n^2 + 9n + 5$ _____

11. $12 - y - y^2$ _____ 12. $10 + 19m + 6m^2$ _____

13. $a^2 + 3a + 2$ _____ 14. $3x^2 - 5x + 2$ _____

15. $5x^2 - 13x - 6$ _____ 16. $b^2 + 4b + 3$ _____

17. $c^2 + 6c + 5$ _____ 18. $3x^2 + 10x + 8$ _____

Find each product.

19. $(x + 3)(4x + 7) =$ _____

20. $(y - 6)(y + 6) =$ _____

21. $(7 - 3r)(8 - 2r) =$ _____

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Difference of Squares

Factor these perfect squares. ~~_____~~

1. $a^2 - b^2 =$ _____

2. $x^2 + y^2 =$ _____

3. $a^2 - 36 =$ _____

4. $m^2 - 16n^2 =$ _____

5. $4a^2 - 9b^2 =$ _____

6. $x^2 - 64 =$ _____

7. $a^2 - 81 =$ _____

8. $16t^2 - 25j^2 =$ _____

9. $9z^2 - 25 =$ _____

10. $81p^2 - 64 =$ _____

11. $49d^2 - 121 =$ _____

12. $36 - w^2 =$ _____

Factor these polynomials. ~~_____~~

13. $a^2 + 2ab - 3b^2 =$ _____

14. $12r^2 - 11r + 3 =$ _____

15. $x^2 + 12x + 32 =$ _____

16. $18h^2 - 27hj - 5j^2 =$ _____

17. $3g^2 - 16g + 16 =$ _____

18. $x^2 - 100 =$ _____

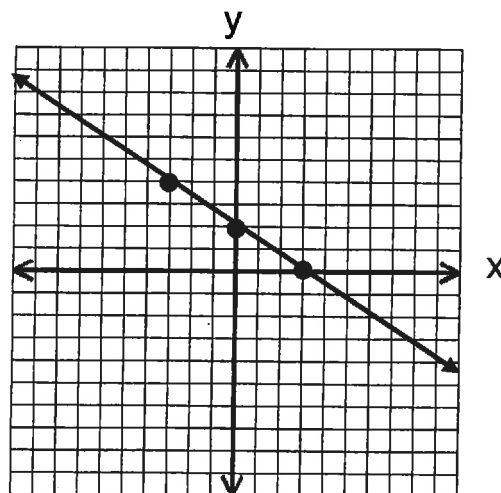
19. $\frac{1}{4}x^2 - 9 =$ _____

20. $8s^2 + 2s - 3 =$ _____

21. $4r^2 + 9rs - 10s^2 =$ _____

22. $49h^2 - 16k^2 =$ _____

23. Write the equation of the given line.



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Factoring Completely

Factor completely.

1. $3a^2 - 15a + 12$

2. $2r^3 - 4r^2 - 6r$

3. $3x^3 - 3x$

4. $x^2 - 13x + 30$

5. $5n^2 - 10n$

6. $2t^3 - 14t^2 + 24t$

7. $5a^2 - 35a + 50$

8. $2z^2 - 7z - 15$

9. $18y^2 - 50$

10. $3p^4 - 5p^3 - 28p^2$

11. $10b^3 + 34b^2 - 24b$

12. $30a^2 - 114a + 108$

13. $2x^2 - 32$

14. $15x^3 + 10x^2 - 20x$

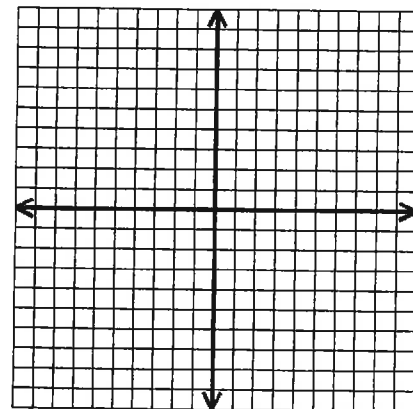
15. Write the equation of the line that passes through $(-2, -12)$ and $(5, 2)$.

16. Graph $y - 2x > -3$
 $x > -5$

Which points are in the solution set?

$(-1, 3)$ $(7, 4)$ $(-4, -7)$ $(6, -2)$

(circle the correct ones)



17. The sides of a vegetable garden in the shape of a right triangle are in the ratio of 3:4:5. If the perimeter is 96 feet, what is the length of the shortest side?

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Factoring Completely – Again

Factor completely. 

1. $6a^2 - 5a - 4$

2. $4x^2 - 9$

3. $7a^3 - 49a^2 + 84a$

4. $8a^3 + 6a^2$

5. $10x^2 + 25x - 30$

6. $r^2 + 2r - 35$

7. $48c^3 - 3c$

8. $6ab^2 - 2a^2b^3 + 4a^3b$

9. $5x^2 + 32x + 12$

10. $3x^2 + 4$

11. $18m^2 - 6m - 4$

12. $2y^3 - 6y^2 + 10y$

13. $8x + 32$

14. $100n^2 - 16$

15. $2p^3 - 12p^2 - 54p$

16. $8a^2 - 12$

17. $4x^2 + 4x - 15$

18. $-11t^3 - 33t^2 - 22t$

19. $6d^3 - 15cd + 21d$

20. $r^2 - 10r + 24$