Answers for Lesson 5-4 Exercises

1. $3; 3(a^2 + 3)$	**2.** $5; 5(5b^2 - 7)$	**3.** $x; x(x - 2)$
4. $t; t(5t + 7)$	**5.** $7y; 7y(2y + 1)$	**6.** $9p; 9p(3p - 1)$
7. $(x + 1)(x + 2)$	**8.** $(x + 2)(x + 3)$	**9.** $(x + 2)(x + 5)$
10. $(x + 2)(x + 8)$	**11.** $(y + 3)(y + 12)$	**12.** $(x + 2)(x + 20)$
13. $(x - 1)(x - 2)$	**14.** $(x - 12)(x - 1)$	**15.** $(r - 2)(r - 9)$
16. $(x - 4)(x - 6)$	**17.** $(d - 3)(d - 9)$	**18.** $(x - 4)(x - 9)$
19. $(x - 7)(x + 2)$	**20.** $(x + 5)(x - 4)$	**21.** $(x - 8)(x + 5)$
22. $(c + 9)(c - 7)$	**23.** $(x + 15)(x - 5)$	**24.** $(t - 11)(t + 4)$

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25. $(3x + 4)(x + 9)$	**26.** $(x - 8)(2x - 3)$
27. $(r + 2)(5r + 13)$	**28.** $(m - 3)(2m - 5)$
29. $(t + 4)(5t + 8)$	**30.** $(x - 12)(2x - 3)$
31. $(x + 4)(3x - 5)$	**32.** $(y + 4)(5y - 8)$
33. $(x - 2)(7x + 6)$	**34.** $(z + 4)(2z - 7)$
35. $(x + 4)(3x - 4)$	**36.** $(4k + 3)(7k - 2)$
37. $(x + 1)^2$	**38.** $(t - 7)^2$
39. $(x - 9)^2$	**40.** $(2n - 5)^2$
41. $(3x + 8)^2$	**42.** $(9z + 2)^2$
43. $(x + 2)(x - 2)$	**44.** $(c + 8)(c - 8)$
45. $(3x + 1)(3x - 1)$	**46.** $x^2 - 16; (x + 4)(x - 4)$
61. $3(y + 3)(y + 5)$	**62.** $-(x - 1)(x - 4)$
63. $2(x - 5)(2x - 1)$	**64.** $\frac{1}{2}(x + 1)(x - 1)$
65. $-6(z^2 + 100)$	**66.** $\pi h(R + r)(R - r)$

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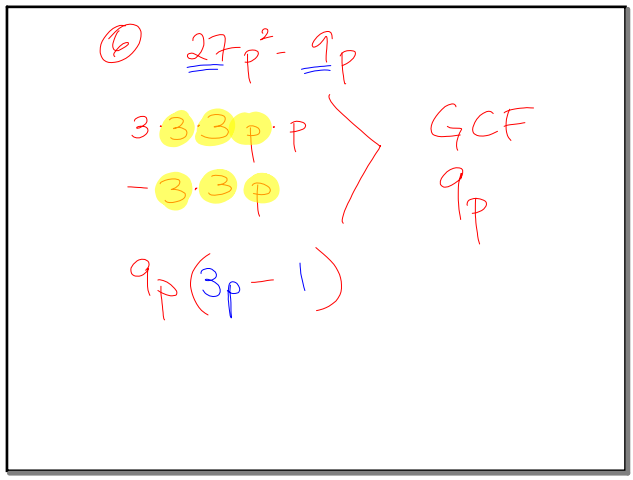

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(44) $c^2 - 64$

unsquare it $\sqrt{c^2} = c$

unsquare it $\sqrt{64} = 8$

$(c + 8)(c - 8)$

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(19) $x^2 - 5x - 14$

F: factors of $c = -14$

A: add to $b = -5$

~~-7 and $+2$~~

$(x - 7)(x + 2)$

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(28) $2m^2 - 11m + 15$

when $a > 1$ ....

$a \cdot c = 2 \cdot 15 = 30$

Factors of $a \cdot c = +30$

Add to $b = -11$

-5 and -6

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$2m^2 - 11m + 15$

$2m^2 - 5m - 6m + 15$

$m(2m-5) - 3(2m-5)$

$(2m-5)(m-3)$

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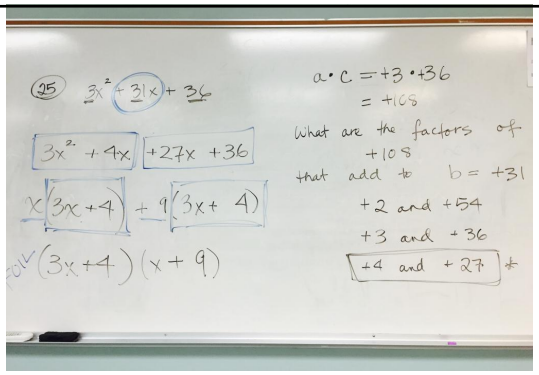

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Checking

$(3x+4)(x+9)$

Foil

$3x^2 + 27x + 4x + 36$

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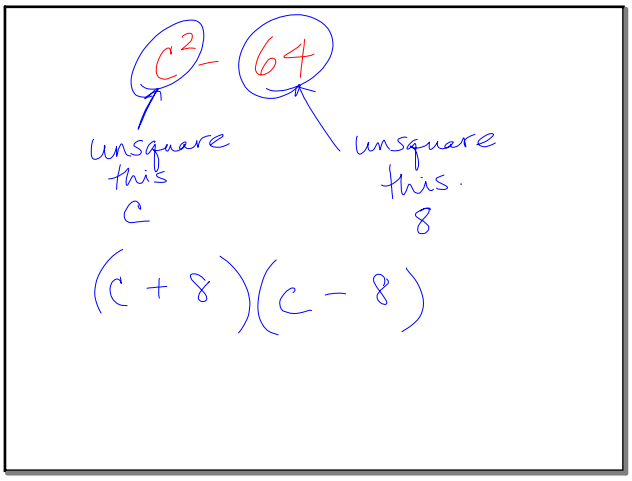

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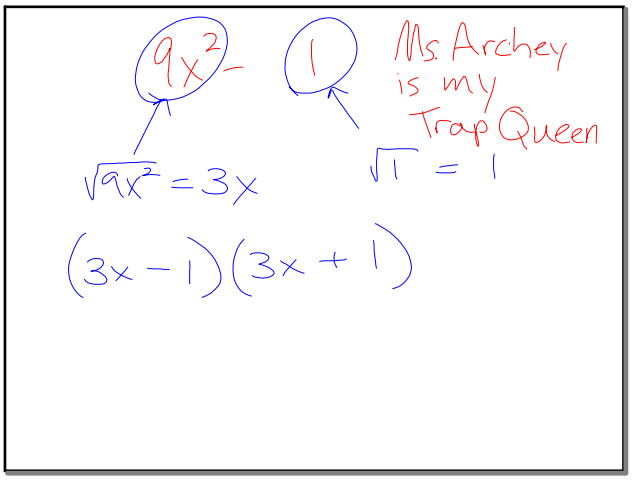

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Factoring Quadratic Expressions Again

- Factoring out a GCF
- When a = 1 . . .
- When a > 1
- GCF? Then a = 1 . . .

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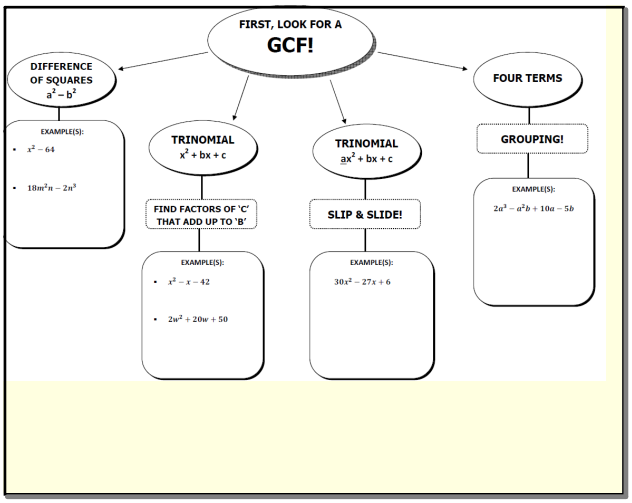

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Factoring out a GCF . . .

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When a=1 . . .

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When a > 1 . . . .

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GCF? Then a = 1 . . . .

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Homework:

Worksheet (10 - 60 even, 61, 66, 72, 73)

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