

Bell Ringer

Thursday 9/26

Solve each equation.

1. $x^2 - 12x + 20 = 0$

$(x-2)(x-10) = 0$

 $x-2=0$ $x-10=0$

 $x=2$ $x=10$

3. $x^2 - 2x - 15 = 0$

$x^2 - 2x - 15 = 0$

 $(x+3)(x-5) = 0$

 $x+3=0$ $x-5=0$

 $x=-3$ $x=5$

2. $x^2 + 5x + 6 = 0$

$(x+2)(x+3) = 0$

 $x+2=0$ $x+3=0$

 $x=-2$ $x=-3$

4. $x^2 + 3x - 28 = 0$

$x^2 + 3x - 28 = 0$

 $(x+7)(x-4) = 0$

 $x+7=0$ $x-4=0$

 $x=-7$ $x=4$

2.6 Day 1 online hw due today
2.6 Day 2 online hw due tomorrow

Factoring and Solving Review

What to do when....

$$(x+2)(3x-3)$$

2 terms

$$21x^2 - 14 = 7(3x^2 - 2)$$

$$\rightarrow (x+2)(x-1)$$

GCF

3 terms

GCF - do steps on blue sheet!

4 terms

GCF - factor by grouping!

Factor and Solve Polynomials Practice

Name: _____

due Friday at the end of class

Factor Completely.



1. $5a^2 - 15$

$$5(a^2 - 3)$$

2. $6xy^2 - 3xy + 8y - 4$

3. $2y^3 - 6xy^2 + 8x^2y$

4. $6n^2 - 13n + 6$

5. $x^2 + 3x + 2$



6. $x^2 - 14x + 40$

$$(x-10)(x-4)$$

$$\begin{array}{r} +40 \\ \wedge \\ -10 \quad +4 \end{array}$$

Change #8

7. $6x^2 - 17x - 3$

8. $2a^2 + 8ab - 3a - 12b$

9. $2x^2 - 3x - 20$

10. $x^2 - 12x - 64$



11. $6mn - 9m - 4n + 6$

12. $75b^2c^3 + 60bc^6$

$$3m(2n-3) - 2(2n-3)$$

$$(2n-3)(3m-2)$$

Solve each equation.

13. $3x^2 + 2x - 8 = 0$

😊 14. $2x^2 - 3x = 0$

15. $x^3 + 5x^2 - 9x - 45 = 0$

$$x(2x-3) = 0$$

$$\boxed{x=0} \quad 2x - \cancel{3} = 0$$

$$\quad \quad \quad +\cancel{3} \quad -\cancel{3}$$

$$\quad \quad \quad 2x = 3$$

$$\quad \quad \quad \frac{2x}{2} = \frac{3}{2}$$

$$\quad \quad \quad \boxed{x = \frac{3}{2}}$$

16. $x^2 + 20 = -9x$

17. $4z^3 - 32z^2 - 5z = -40$

18. $6z^2 = 18z$

19. $15c + 30c^2 = 0$

😊 20. $-25k - 75 + k^3 = -3k^2$

21. $5x^2 + 22x = 15$

$$k^3 + 3k^2 - 25k - 75 = 0$$

$$k^2(k+3) - 25(k+3) = 0$$

$$(k+3)(k^2 - 25) = 0$$

$$k + \cancel{3} = 0$$

$$\quad \quad \quad -\cancel{3}$$

$$\boxed{k = -3}$$

$$k^2 - 25 = 0$$

$$\quad \quad \quad +\cancel{25} \quad +\cancel{25}$$

$$\sqrt{k^2} = \sqrt{25}$$

$$k = \pm 5$$

$$\boxed{k = 5, -5}$$

$$(5)(5) = 25$$

$$(-5)(-5) = 25$$

