

Bell Ringer

Wednesday 10/2

Factor Completely

1. $h^2 + 30h + 225$

$$(h+15)(h+15)$$

$$(h+15)^2$$

$$\begin{array}{c} 225 \\ \wedge \\ 15 \quad 15 \end{array}$$

2. $2x^3 + 3x^2 - 18x - 27$

$$x^2(2x+3) - 9(2x+3)$$

$$(2x+3)(x^2-9)$$

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

3. $36a^4 - 4a^2$

$$4a^2(9a^2 - 1)$$

$$4a^2(3a+1)(3a-1)$$

2.7 online hw due today!

2.8 online hw due tomorrow!

Ch 2 Test Monday

- 2A Opp 2

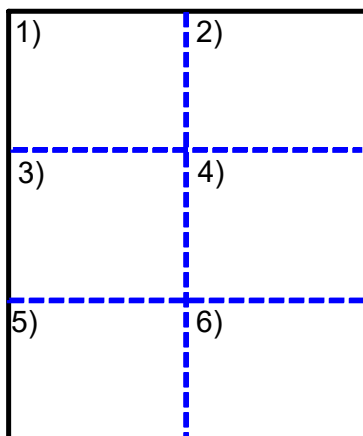
- 2B Opp 1

Difference of Squares Review

kahoot.it

Factoring Practice

Divide paper into 6 rectangles



1) Factor

$$ax^2 + bx + c$$
$$| x^2 - 8x - 20$$

^

2 min

$$-20$$

^

$$2 \quad -10$$

$$(x+2)(x-10)$$

2) Factor

2 min

$$\begin{aligned} & \underbrace{x^3 + 3x^2}_{x^2(x+3)} - \underbrace{4x - 12}_{-4(x+3)} \\ & \underline{x^2(x+3)} - \underline{4(x+3)} \\ & (x+3)(\underline{x^2 - 4}) \\ & (x+3)(x+2)(x-2) \end{aligned}$$

.

3) Factor

3 min

$$2a^3 - 9a^2 + 10a$$

$$\begin{aligned}
 & a(2a^2 - 9a + 10) \\
 & \quad \swarrow \quad \quad \quad \uparrow \quad \quad \quad \searrow \\
 & \quad \underline{2a^2 - 5a} \quad \underline{-4a + 10} \\
 & \quad \underline{a(2a-5)} \quad \underline{-2(2a-5)} \\
 & \quad a(2a-5)(a-2)
 \end{aligned}$$

$$\begin{aligned}
 & +20 \\
 & -5 \quad -4
 \end{aligned}$$

4) Factor

$$6x^3y + 30xy^2$$

2 min

$$6xy(x^2 + 5y)$$

5) Solve

3 min

$$x^2 + 7x = -12$$

$$\begin{array}{l} +12 \\ \wedge \\ +3 \quad +4 \end{array}$$

$$x^2 + 7x + 12 = 0$$

$$(x + 3)(x + 4) = 0$$

$$x + 3 = 0$$

$$\begin{array}{l} -3 \\ \rightarrow \end{array}$$

$$x = -3$$

$$x + 4 = 0$$

$$\begin{array}{l} -4 \\ \rightarrow \end{array}$$

$$x = -4$$

6) Solve

3 min

$$5y^3 - 20y = 0$$

$$5y(y^2 - 4) = 0$$

$$\underline{5y(y+2)(y-2) = 0}$$

$$\begin{array}{ccc} \frac{5y}{5} = 0 & \frac{y+2}{-2} = 0 & \frac{y-2}{+2} = 0 \\ y = 0 & y = -2 & y = 2 \end{array}$$

$$\begin{array}{l} \frac{5y}{5} = \frac{0}{5} \quad y = 0 \\ y^2 - 4 = 0 \\ \sqrt{y^2} = \sqrt{4} \\ y = \pm 2 \end{array}$$

great opportunity to practice / study!

Factoring and Solving Practice

Name: _____ Hr: _____

Factor Completely.

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

2. $6x^2 + x - 15$

3. $2x^2 - 18$

4. $x^2 - 23x + 102$

5. $21x^3 - 35xy^2$

6. $3x^3 - x^2 - 12x + 4$

7. $6ax^2 + 11ax - 10a$

8. $3x^2 - 12$

9. $6x^2 - 10x - 4$

Solve for x.

10. $15x^2 - x = 2$

11. $4x^3 + 12x^2 - x - 3 = 0$

12. $3x^2 = 9x$

13. $x^2 + 4x - 21 = 0$

