Warm-Up **March 12, 2019**

1. Factor $\frac{5x^2y}{5xy} - \frac{65xy^3}{5xy} + \frac{200xy}{5xy}$ $5xy(x-13y^2+40)$

2. Factor: $\frac{4x^3y^3}{2xy^3} - \frac{2x^2y^3}{2xy^3} + \frac{8xy^3}{2xy^3}$ $2xy^3(2x^2-x+4)$

3. Which is a binomial factor of $(6x^2 + 3x - 14x - 7?)$

a. (6x - 1) b. (2x - 7) c. (3x + 1) d. (3x - 7)

$3x(2x+1)-7(2x+1)$

$(3x-7)(2x+1)$ .10 0.05 =

4. Clara collects dimes and nickels. She has a total of 47 coins. She counted the value of nickels and dimes and found out she has $4.05. Write a system of equations to model this scenario.

$d+n=47$

$0.10d+0.05n=4.05$

Factor each polynomial. Check your answer by distributing.

1.) $2x^2 + 5x + 2$

$a=2 \quad b=5 \quad c=2$

$ac = 4$

1 | 4

2 | 2

$(2x^2 + x)(+4x + 2)$

$x(2x+1) + 2(2x+1)$

$(x+2)(2x+1)$

What is different about this problem?

2.) $3n^2 + 5n + 2$

$a=3 \quad b=5 \quad c=2$

$ac = 6$

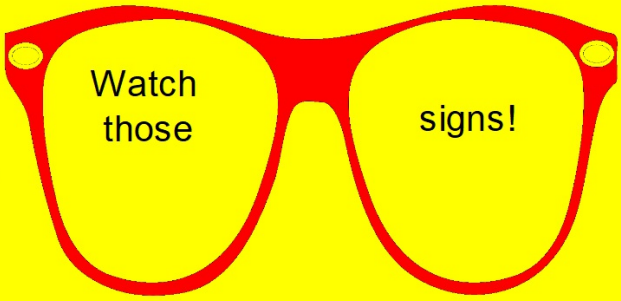
1	6
2	3

$(3n^2 + 2n + 3n + 2)$

$n \quad n \quad 1 \quad 1$

$n(3n+2) + 1(3n+2)$

$(n+1)(3n+2)$



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3.) $2y^2 + 9y - 5$

What if there is a GCF?

10. $8x^2 - 2x - 10$

$\frac{2}{2} \quad \frac{2}{2} \quad \frac{2}{2}$

$2(4x^2 - x - 5)$

$a=4 \quad b=-1 \quad c=-5$

$ac=-20$

-1	20
-2	10
-4	$5 \rightarrow -5+4$

$(4x^2 - 4x)(+5x - 5)$

$\frac{4x}{4x} \quad \frac{4x}{4x} \quad \frac{5}{5} \quad \frac{5}{5}$

$4x(x-1)(+5)(x-1)$

$2(4x+5)(x-1)$

12. $60x^2 + 4x - 8$