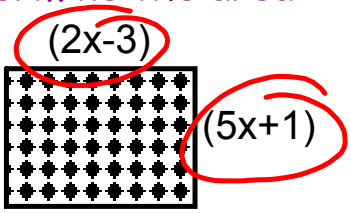
Determine the area:



$A = L \times W$

$A = (5x+1)(2x-3)$

$10x^2 - 15x + 2x - 3$

$= 10x^2 - 13x - 3$

$x^2 - 12x + 20$

$-10 \times -2 = 20$

$-10 + -2 = -12$

$+1 \quad x - 30$

$+2 \quad x - 15$

$+3 \quad x - 10$

Which of the following can be represented by a rectangle?

$5a^2 - 7a - 6$

diff

$\_x\_ = -30$

$\_+\_ = -7$

Big −

$5a^2 - 12a - 6$

diff

$\_x\_ = -30$

$\_+\_ = -12$

Big −

$1 \quad x - 30$

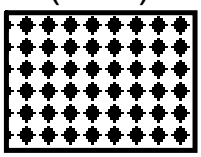
$2 \quad x - 15$

$3 \quad x - 10$

$5 \quad x - 6$

Determine the area:

(2x-3)



(5x+1)

(2x-3)(5x+1)

$10x^2+2x-15x-3$

$10x^2-13x-3$

Which of the following can be represented by a rectangle?

$5a^2-7a-6$

____ + ___ = -7

____ x ___ = -30

1 -30
2 -15
3 -10
5 -6

$5a^2+3a-10a-6$

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

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

$5a^2-12a-6$

___ + ___ = -12

____ x ___ = -30

??

1 -30
2 -15
3 -10
5 -6

Not Possible!!

Factoring Rules

1st - Check for a common factor

2nd - Count how many terms

- 2 Terms (Difference of Squares)
- 3 Terms (Trinomial simple or clinger)

Common Factoring

$g^4x^2-g^9x^5$

$22w^7-88z^{14}$

$4r^8-16r^7s^9+2r^{10}$

Trinomial

$4z^2+16z+7$

$m^2-10m-9$

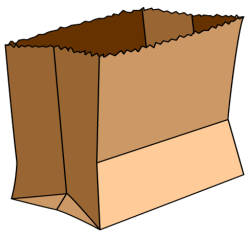
$x^2-9x+16$

Difference of Squares

$64v^2-81$

x^2-16

Choose a polynomial out of the bag and then determine which type of factoring it is.



How are your Factoring Skills?

Factor each of the following:

1. $15m^5n^3p - 30n^7p^3 + 60m^4n^8p^5$
2. $x^2 - 2x - 35$
3. $270xy^2 - 180x^3y - 90xy$
4. ~~$5x^2 + 14xy - 3y^2$~~
5. $4x^2 - 14x - 8$

1. $15m^5n^3p - 30n^7p^3 + 60m^4n^8p^5$

$15n^3p\,(m^5 - 2n^4p^2 + 4m^4n^5p^4)$

2. $x^2 - 2x - 35$

____ + ___ = -2

____ x ___ = -35

1 -35

5 -7

$(x + 5)(x - 7)$

3. $270xy^2 - 180x^3y - 90xy$

$90xy(3y - 2x^2 - 1)$

4. $5x^2 + 14xy - 3y^2$

$5x^2 + 14xy - 3y^2$

____ + ___ = -14

____ x ___ = -32

1	-32
2	-16
4	-8

$4x^2 - 14x - 8$

$2(2x^2 - 7x - 4)$

$\_ \times \_ = -8$

$\_ + \_ = -7$

1×-8

$35x^2 - 11x - 6$

$\_ \times \_ = -210$

$\_ + \_ = -11$

$+1 \times -210$

2×-105

3×-70

5×-42

6×-35

7×-30

10×-21

$\left(\frac{35x}{35} + \frac{10}{35}\right)\left(\frac{35x}{35} - \frac{21}{35}\right)$ ÷5 ÷7

$\left(x + \frac{2}{7}\right)\left(x - \frac{3}{5}\right)$

$= (7x+2)(5x-3)$