Algebra 1

<u>Our Goal</u>: To learn how to factor $ax^2 + bx + c$

<u>Warm Up</u>: factoring handout

<u>Today's Homework</u>
- 7.6 Exercises, p.395: 4-32 (evens)
- iready is due Friday, the snow day does not make it a "short" week

<u>Previous Homework</u>
7.5 Exercises, p.389: 4-38 (evens)

$$x^2 + x + 5$$

$$x^2 + x - 6$$
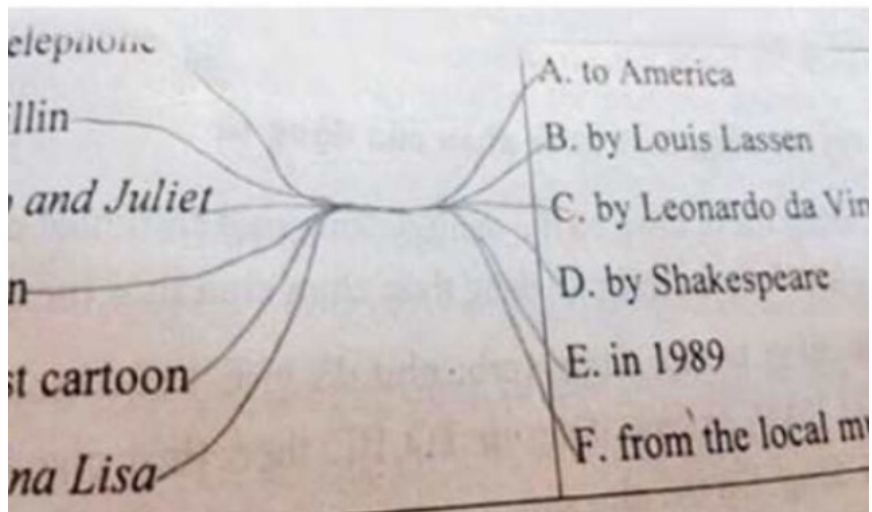$$(x+3)(x-2)$$

$$2x^2 + x - 6$$
$$(2x-3)(x+2)$$

$$6, -1$$
$$-6, 1$$
$$3, -2$$
$$-3, +2$$

Factor

Multiply

4,823 =

91×53

"Draw a line to the correct answer."

elephone

A. to America

llin

B. by Louis Lassen

and Juliet

C. by Leonardo da Vin

n

D. by Shakespeare

t cartoon

E. in 1989

na Lisa

F. from the local m

$$(x^2+y^2-1)^3 \le x^2y^3$$

My grandpa left this surprise in my Grandma's camera roll on her new phone 😭

Write an equation in slope-intercept form of the line that passes through the given points.

1. (8, 1), (3, 11)

2. (7, −2), (4, −8)

Factor $5x^2 + 15x + 10$.

$5(x^2 + 3x + 2)$

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

18
2 9
1 1
3 3

Factor each polynomial.

a. $3x^2 - 7x + 2$

b. $4x^2 + 13x + 3$

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

$(3x - 1)(x - 2)$ ✓

$(4x + 3)(x + 1)$

$(4x + 1)(x + 3)$

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

Factor   **c.** $2x^2 - 5x - 7$ **d.** $-4x^2 - 8x + 5$

prod $= -14$

Sum $= -5$

$-7, 2$

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

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

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

$2x \quad 7$
$x \quad -1$

$2x \quad 1$
$x \quad -7$

Factor the polynomial.

1. $8x^2 - 56x + 48$

2. $14x^2 + 31x + 15$

3. $2x^2 - 7x + 5$

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

4. $3x^2 - 14x + 8$

5. $4x^2 - 19x - 5$

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

7. $-2y^2 - 5y - 3$

8. $-5m^2 + 6m - 1$

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

$-(5m^2 - 6m + 1)$

$-(5m - 1)(m - 1)$

$6x^2 + x - 12$

$\text{prod} = -72$
$\text{sum} = 1$
$9, -8$

$(6x^2 - 8x) + (9x - 12)$

$2x(3x - 4) + 3(3x - 4)$

$(3x - 4)(2x + 3)$

The length of a rectangular game reserve is 1 mile longer than twice the width. The area of the reserve is 55 square miles. What is the width of the reserve?

• Exit Ticket: Factor $2x^2 - 7x + 3$.