Bell Ringer

Thursday 9/12

Given the expression $2x-3+8x^2-4x-5x^2+6$ find the following:

1. Standard Form

$3x^2-2x+3$

2. Leading Coefficient

3

3. Name based on degree

2

4. Name based on number of terms

Trinomial

Essential Question

How can you multiply two polynomials?

Distribute:

$2x(3x^2 + 5x - 6) =$

$6x^3 + 10x^2 - 12x$

$5n(3n^3 - n^2 + 8) =$

$15n^4 - 5n^3 + 40n$

Use the Distributive Property to find the product.

I do...

1. $(y + 4)(y + 1)$

$y^2 + 1y + 4y + 4$

$y^2 + 5y + 4$

You do...

2. $(x - 2)(x + 6)$

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

$x^2 + 4x - 12$

Core Concept

FOIL Method

To multiply two binomials using the FOIL Method, find the sum of the products of the

First terms, $(x + 1)(x + 2)$ → $x(x) = x^2$

Outer terms, $(x + 1)(x + 2)$ → $x(2) = 2x$

Inner terms, and $(x + 1)(x + 2)$ → $1(x) = x$

Last terms. $(x + 1)(x + 2)$ → $1(2) = 2$

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

Use the FOIL Method to find the product.

I do...

$(m - 3)(m - 7)$

$m^2 - 7m - 3m + 21$

$m^2 - 10m + 21$

We do...

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

$x^2 + 2x - 4x - 8$

$x^2 - 2x - 8$

Use the FOIL Method to find the product

w/ Partner...

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

$n^3+3n+2n^2+6$

n^3+2n^2+3n+6

By yourself...

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

$-2a^3-2a^2-3a-3$

Use a table to find the product.

I do...

$(p + 3)(p - 8)$

	p	$+3$
p	p^2	$+3p$
-8	$-8p$	-24

$p^2 - 5p - 24$

You do...

$(r - 5)(2r - 1)$

	r	-5
$2r$	$2r^2$	$-10r$
-1	$-1r$	$+5$

$2r^2 - 11r + 5$

Find the each product using any method...

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

Distribute or use a table to find the product.

Find $(x + 5)(x^2 - 3x - 2)$.

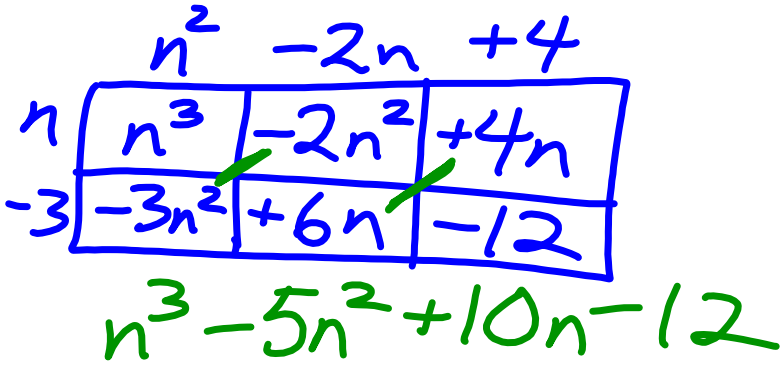
$x^3 - 3x^2 - 2x + 5x^2 - 15x - 10$

	x^2	$-3x$	-2
x	x^3	$-3x^2$	$-2x$
$+5$	$5x^2$	$-15x$	-10

$x^3 + 2x^2 - 17x - 10$

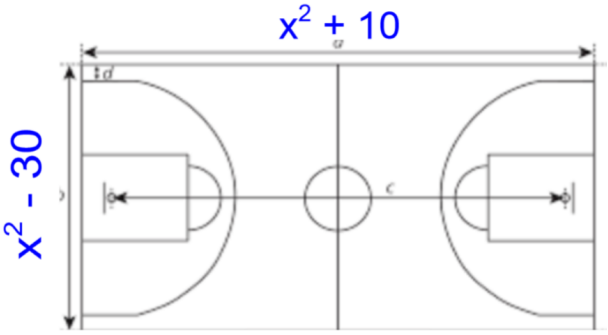
Distribute or use a table to find the product.

Find $(n - 3)(n^2 - 2n + 4)$.



$n^3 - 5n^2 + 10n - 12$

Write an **expression** that represents the AREA of the basketball court...

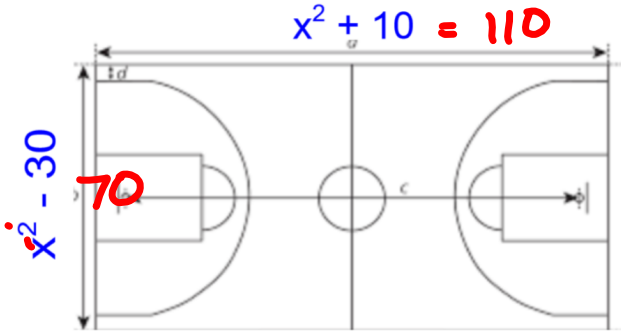


$A = (x^2 + 10)(x^2 - 30)$

$x^4 - 30x^2 + 10x^2 - 300$

$x^4 - 20x^2 - 300$

If x = 10, find the area of the basketball court.



$A = x^4 - 20x^2 - 300$

$10^4 - 20(10)^2 - 300$

$= 7,700 \text{ ft}^2$

$10,000 - 2000 - 300$

$7,700$

You design a frame to surround a rectangular photo. The width of the frame is the same on every side as shown.

12+2x

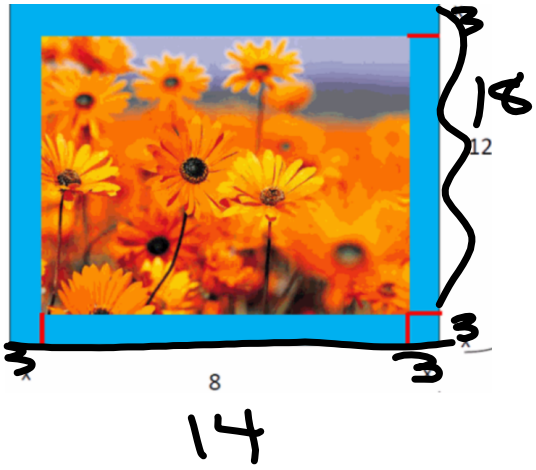
x+8+x
8+2x

Write a polynomial in standard form that represents the combined area of the photo and the frame.

	12	+2x
8	96	16x
+2x	24x	$4x^2$

$4x^2+40x+96$

Find the area of the photo and frame when the width of the frame is 3 in.



$4x^2 + 40x + 96$

$4(3)^2 + 40(3) + 96$

$4 \cdot 9 + 120 + 96$

$36 + 120 + 96$

$252 in^2$

2.2 hw pg 73-74 #s 1-2, 3, 7, 11, 15, 19, 23, 27, 31, 35, 39, 43, 44, 52, 56-57