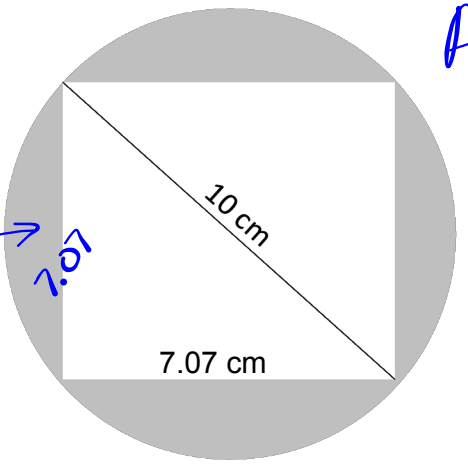
Warm Up

5/16

What is the area of the shaded part of the circle?

(This is really 2 problems in one)



$A_{circle} = \pi r^2$

$= \pi (5)^2$

$= 78.54 \text{ cm}^2$

find this

7.0^2

$a^2 + b^2 = c^2$

$7.07^2 + b^2 = c^2$

$b = 7.07$

$A_{square} = (7.07)^2$

$= 49.98$

Shaded Area: $A_{circle} - A_{square}$

$= 78.54 - 49.98$

$= 28.56 \text{ cm}^2$

Measurement and Angles Quiz

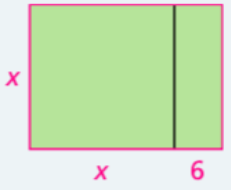
You need to know how to:

- Calculate perimeter and area of circles and polygons.
- Calculate volume and surface area of regular prisms.
- Find a dimension given an area or volume.
- Find angle measures of triangles and parallel lines cut by a transversal
- Solve real life measurement problems

Problem 2.2

A Each rectangle is the result of changing one or more dimensions of a square. Each rectangle has been subdivided into two or four smaller rectangles. Write two expressions for the area of the rectangle outlined in red, one in factored form and one in expanded form.

1.



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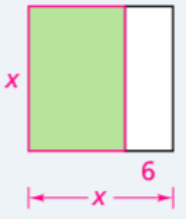
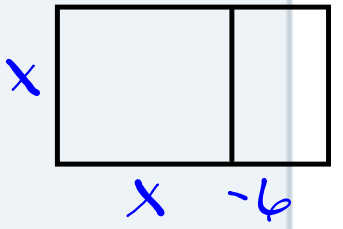


Rewrite



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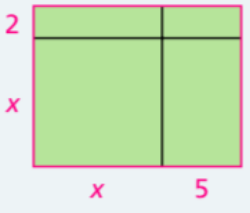

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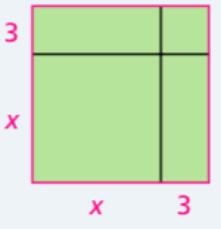

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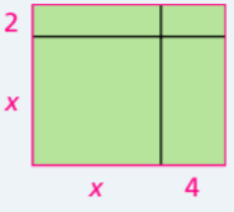

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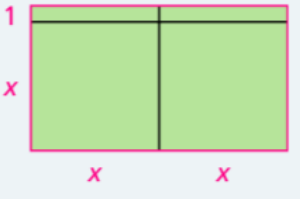

B Use a rectangle model to write each expression in expanded form.

1. $(x + 3)(x + 5)$
2. $(4 + x)(4 + x)$
3. $3x(x + 1)$

D Use the Distributive Property to write each expression in expanded form.

1. $(x+5)(x+5)$
2. $(x-4)(x+3)$
3. $2x(5-x)$
4. $(2x+1)(5-x)$
5. $(n-2)(n+2)$

E. 1. $(x+7)^2 = (x+7)(x+7)$

Methods for Multiplying Binomials

What is a binomial?

The sum or difference of 2 terms
(+) (-)

What is a term?

7 104 x^5 $x+3$ $7x$ x^2y^3

$-3a$ x $5x$ $2xy$ 100^3 ab $5a^2b^3c^5$

Binomials: (two terms)

$x+4$ $7-y$ $y+x$

a^2-7b $32+3b$ $3x+2$

$2-b$ $3+b$ $7x^3-2y$

Methods for Multiplying Binomials

(Find what works for you.)

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

Box (Area)

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

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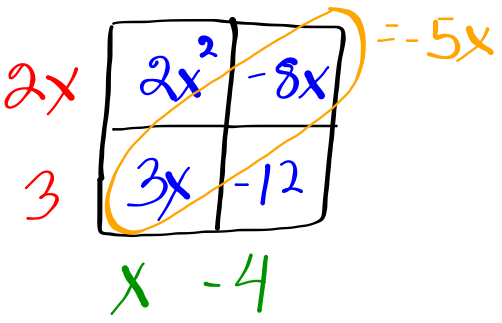


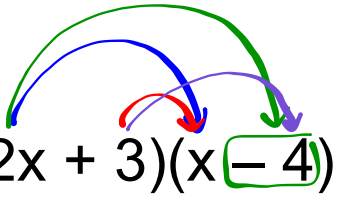
$2x^2 - 8x + 3x - 12$

$2x^2 - 5x - 12$

Distributive Property

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

Multiply everything here by everything here



$2x^2 - 8x + 3x - 12$

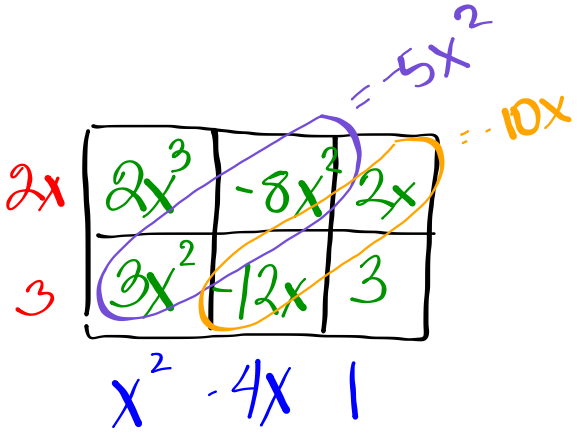
$2x^2 - 5x - 12$

What if we are multiplying with a **Tri**nomial?

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

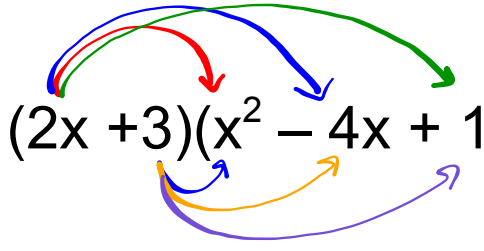
Can we use these methods?

Box



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

Distributive Prop



$2x^3 - 8x^2 + 2x + 3x^2 - 12x + 3$

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

Different ways to do the same thing:

Make sure every term in one binomial is multiplied with every term in the other binomial.

Classwork

Page 40, #'s 23-34

either method

For Exercises 23–34, ~~use the Distributive Property~~ to write each expression in expanded form.

23. $(x-3)(x+4)$

24. $(x+3)(x+5)$

25. $x(x+5)$

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

27. $(x-3)(x+3)$

28. $(x-3)(x+5)$

29. $(2x+1)(x+1)$

30. $(x-1)(7x+1)$

31. $(x-1)(3x-3)$