A1 S2 w6d3 8-6 Factoring Applications

Week 6 Block Warm-up: Factoring Quiz Name: _____

Factor the following: show all work

a.) $4x^2+ 10x$

b.) $4x^2-9$

c.) $11x^3-9x^2+11x-9$

d.) $24x^3+60x^2+36x+90$

e.) $18x^2-27$

f.) $x^2-12x +36$

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Alg 1 Week 6 Block CW/HW **8-6 Common Core Applications of Factoring**

Remember: Area of a rectangle: A=LW

1. The length of a rectangle is 3x+2, and the width is 2x-7. What is the area of the rectangle?

2. The length of a rectangle is 4x-1, and the width is x+5. What is the area of the rectangle?

3. The length of a rectangle is 2x-3, and the width is 5x+4. What is the area of the rectangle?

4. The area of a rectangular computer screen is $4x^2+20x+16$. The width of the screen is 2x+8. What is the length of the screen?

5. The area of a rectangular granite countertop is $12x^2+10x-12$. The width of the countertop is 2x+3. What is the length of the countertop?

6. The area of a rectangular book cover is $4x^2-6x-40$. The width of the book cover is 2x-8. What is the length of the book cover?

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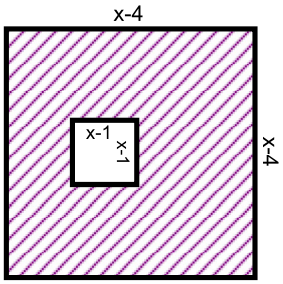
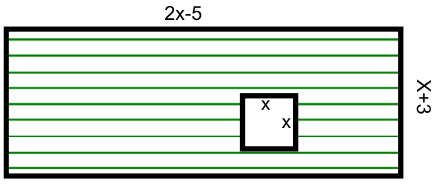
7. Find an algebraic expression in standard form that represents the area of the shaded region.

A)



B)



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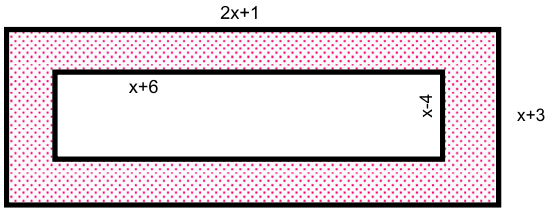

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Alg 1 Week 6 Block HW Name _____

X-Box #4 + Review

Set up an X and a box to factor each polynomial.

1. $2x^2 - x - 6$

2. $6x^2 - 17x - 3$

3. $x^2 - y^2$
   $H\text{int}: x^2 + 0xy - y^2$

4. $x^2 - 7xy + 10y^2$

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

6. $x^2 + 11x + 24$

7. $2xy^3 - 18xy$

8. $x^2 - 15x + 36$

9. $9 - 25x^2$

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Review Section:

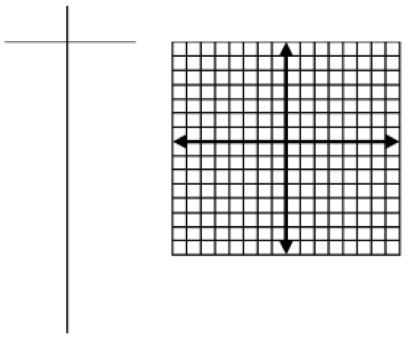
10. Solve $\begin{aligned} 3x+5y&=-12 \\ 4x-2y&=10 \end{aligned}$

11. Simplify $\dfrac{x \bullet (x^2)^{-3}}{x^5 \bullet (x^{-4})^2}$

12. *For* $f(x)=2x^2-5x+6$
Evaluate:
$f(3)=$
$f(-1)=$

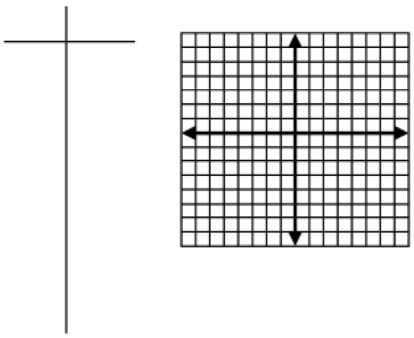
13. Write the equation of the line that is perpendicular to $y=\dfrac{2}{3}x-5$ passing through (8,1).

14. Graph $y=x^2+6x+7$



Axis of symmetry_____
Vertex_____

15. Graph $y=-x^2+3$



Axis of symmetry_____
Vertex_____