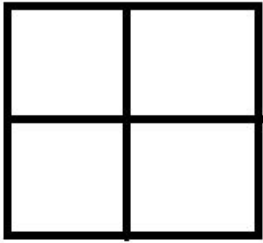


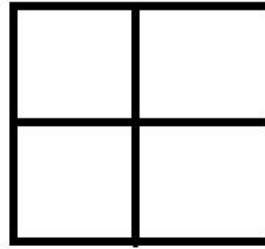
SM2 A#5.4 Factoring when a not 1 with Tiles

1. Factor: $3x^2 + 17x + 10$



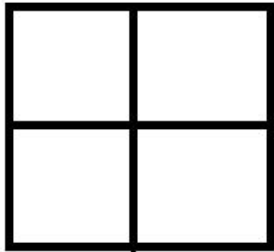
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2. Factor: $2x^2 + 19x + 35$



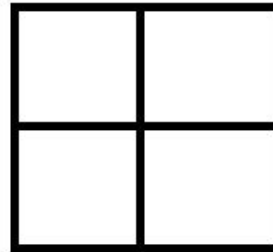
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3. Factor: $5x^2 + 16x + 3$



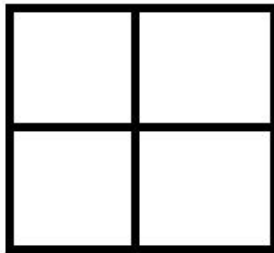
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4. Factor: $2x^2 + 13x + 18$



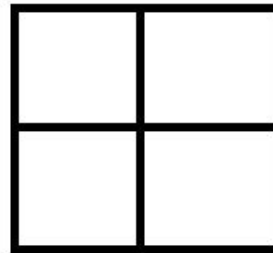
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5. Factor: $x^2 + x$



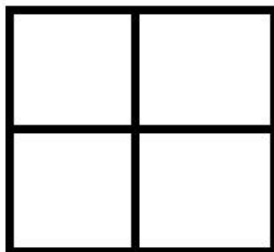
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6. Factor: $3x^2 + 13x + 14$



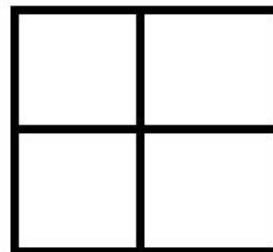
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7. Factor: $2x^2 + 13x + 11$



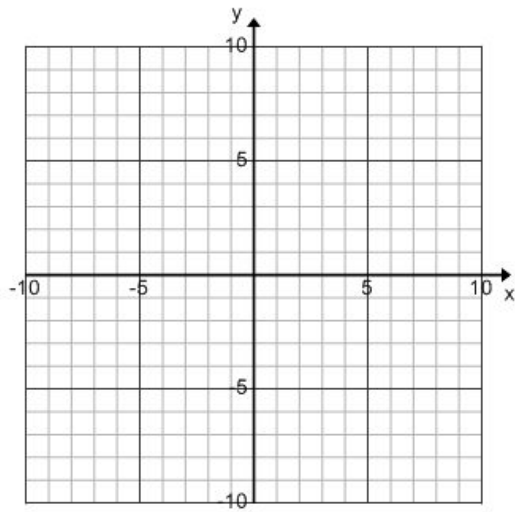
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8. Factor: $4x^2 + 17x + 15$



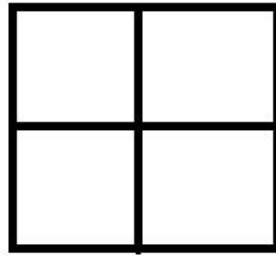
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9. Graph $y = 2x^2 + 12x + 10$, using $-b/2a$ then find the x-int's and y-int.



x-int: (, 0) , (, 0) **y-int:** (0,)

10. Factor:
 $2x^2 + 12x + 10$



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Use the zero product property to find what value makes each factor = 0.

Does this still match your x-intercepts at the left?

11. Find the solutions to $y = x^2 + 5x + 6$

- a) $x = 1$ & $x = -6$
- b) $x = 2$ & $x = -3$
- c) $x = 1$ & $x = 6$
- d) $x = -2$ & $x = -3$

12. Identify the **Term(s)**, **Factor(s)** and **Coefficient(s)** of $y = x^2 - 5x - 24$

Term(s):

Factor(s):

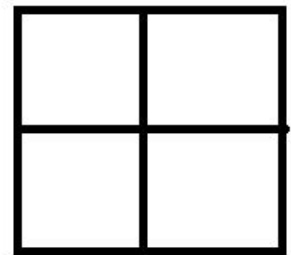
Coefficient(s):

13. Find the Minimum x and y value of
 $y = 2x^2 + 8x + 3$

14. Factor
 $x^2 - 6x - 16 = 0$

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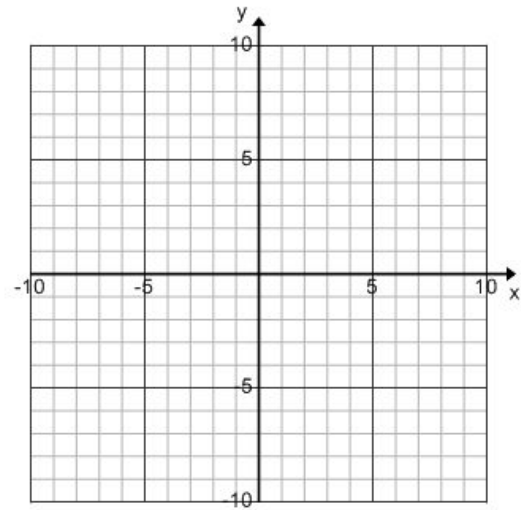
What are the solutions of the above equation?



15. Write the equation from the given table.
 x y

16. Graph $y = -(x + 4)^2$

5	-4
6	-2
7	-4
8	-10
9	-20



17. Coach Fite launches a water balloon with an initial velocity of 49 ft/sec and a height of 4 ft.
 (Hint: $s = -16t^2 + v_0t + s_0$)

What is the maximum height of the water balloon?

How long the water balloon is in the air?

18. Using algebra tiles for $y = x^2 + 10x + 24$, draw or make a diagram for x-Intercept/Rectangle Form.

Using algebra tiles for $y = x^2 + 12x + 32$, draw or make a diagram for Vertex Form.

19. Which of the following is a zero of $y = x^2 - 9x + 20$

- a) -5
- b) -2
- c) 4
- d) 10

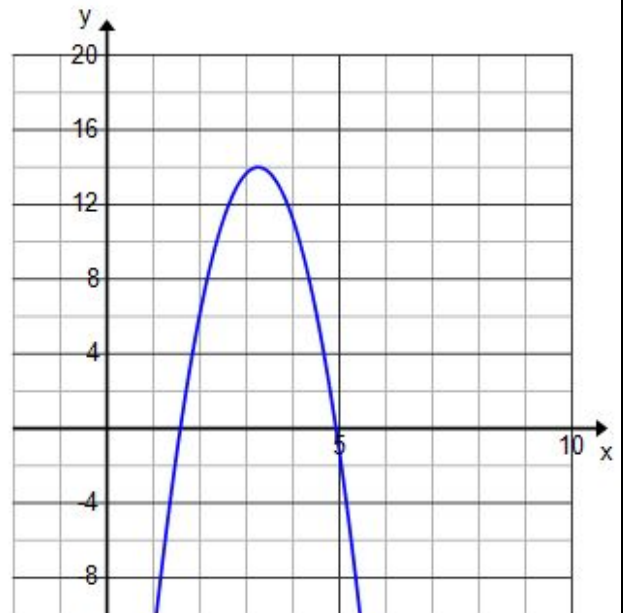
20. Which of the following is an x-int of $y = x^2 - 9x + 20$

- a) (-10 , 0)
- b) (-4 , 0)
- c) (2 , 0)
- d) (5 , 0)

21. $f(x)$ is the table.

x	$f(x)$
2.5	-3
3	4
3.5	9
4	12
4.5	13
5	12
5.5	9
6	4
6.5	-3
7	-12
7.5	-23

$g(x)$ is the graph



- A. Which function hits the maximum first (hint: which maximum has a smaller x-value)?
- B. Which function has the greater maximum?

22. Using STAT find the equation for the following data, then answer the questions below.

seconds	feet
.1	8.04
.3	11.16
.5	13
.7	13.56
1	12
1.5	7.56

22 cont.

What is the initial velocity of the projectile?

What is the starting height?

Equation?

Time to get to the top?

What is the maximum height?

How long until the object hits the ground?