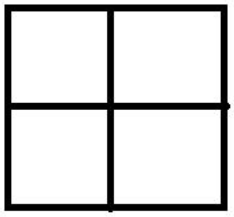
SM2 A5.5 Solutions when "a" is not 1 Name:_____ Period:_____

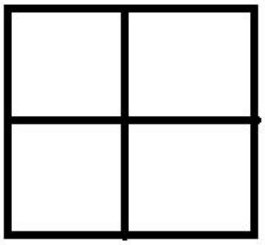
Solve each equation by factoring

1. Solve each equation by factoring: $2v^2 + 5v + 2 = 0$



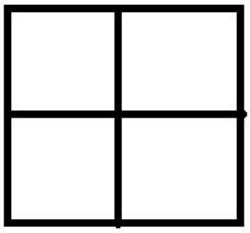
( )( ) so v = _____ , v = _____

2. Solve each equation by factoring: $5x^2 - 34x + 24 = 0$



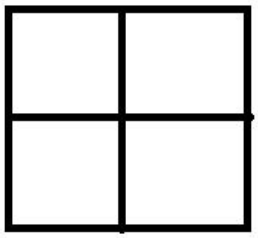
( )( ) so X = _____ , X = _____

3. Find the zeros by factoring: $2k^2 + 8k + 3 = 3$



( )( ) so k = _____ , k = _____

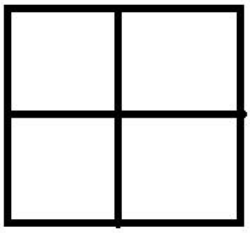
4. Find the x-intercepts by Factoring $5x^2 + 2x - 16 = 0$



(x)(x)

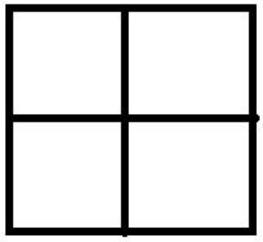
x- intercepts : (____, ____) (_____, ____)

5. Solve each equation by factoring: $7r^2 = -19r + 6$



( )( ) so r = _____ , r = _____

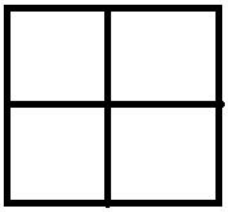
6. Find the x-intercepts by factoring: $2x^2 - 24 = 8$



( )( )

x- intercepts : (____, ____) (_____, ____)

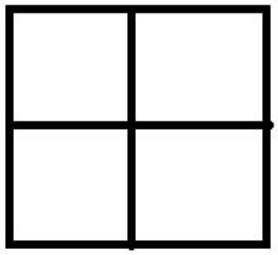
7. Find the x-intercepts by factoring: $2x^2 - 6x - 41 = -5$



( )( )

x- intercepts : (____, ____) (_____, ____)

8. Find the roots by factoring: $4p^2 + 38p = 20$

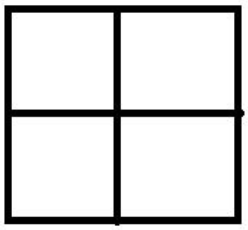
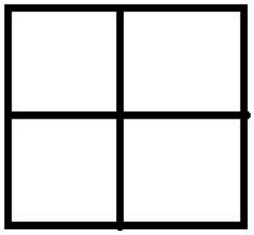
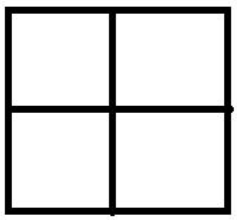
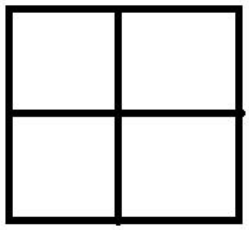
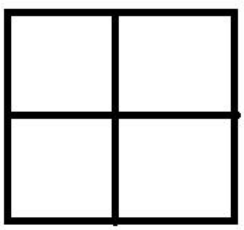
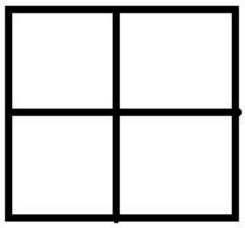


( )( ) so p = _____ , p = _____

9. For the quadratic expression $y = x^2 - 5x - 24$, identify each part as a term, coefficient, or factor by writing it in the correct column.

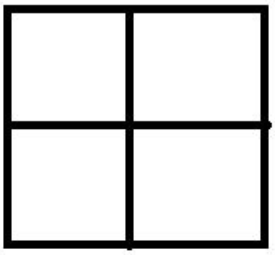
Term	Factor	Coefficient

Factor

10. $v^2 + 4v - 12$  ( )( )	11. $n^2 - 4n$  ( )( )
12. $3y^2 - 12$  ( )( )	13. $3b^2 + 19b + 6$  ( )( )
14. $2x^2 - 7x + 6$ 	15. $6x^2 + 17x - 3$ 

( )( )	( )( )

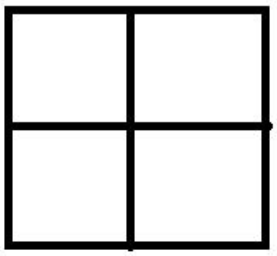
16. Solve the equation: $x^2 + 6x + 8 = 0$



( )( )

x = _____, x = _____

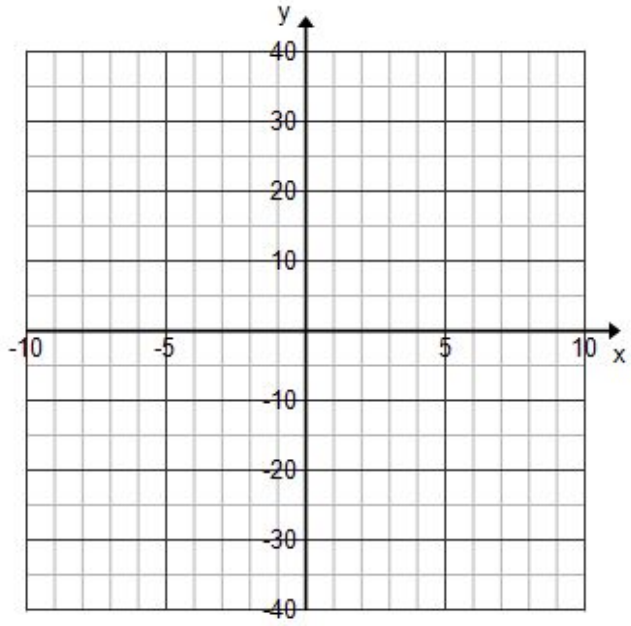
17. Find the roots to the equation: $k^2 + 9 = 18$



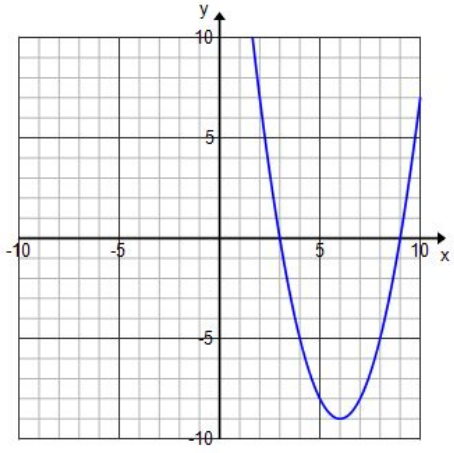
( )( )

k = _____, k = _____

18. Factor $y = x^2 - 6x - 16$, then graph using the x-intercepts and y-intercepts.



19. Given the graph



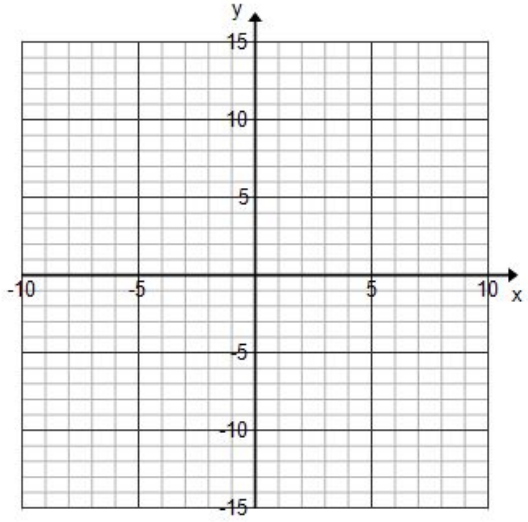
Write the equation in x-Intercept form:
y=___(x_____)(x_____)

Write the equation in Standard Form:

20 Jamie has factored, and has
2(x-3)(x+5)=0
What is the property that helps Jamie get to the answers x = 3 and x = -5?

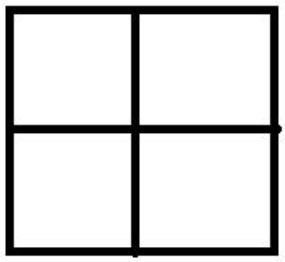
The answers x = 3 and x = 5 are have the following names:
x_____ , S_____, R_____, Z_____

21. Graph $y = 3x^2 - 18x + 24$,using -b/2/a then find the x-int's and y-int.



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

22. Factor:
$y = 3x^2 - 18x + 24$



( )( )

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

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

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

seconds	feet
.1	25.84
.3	26.56
.5	26
.7	24.16
1	19
1.2	13.96

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?

23. If f(x) is the table and g(x) is the graph and h(x) is the equation. Answer the questions below.

$h(x) = -4x^2 + 40x - 84$

x	f(x)
5	5
6	17
7	17
8	5
9	-19

g(x) is graph below:

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

B. Which function has the greater maximum?