

Pick up a survey from front table.

Fill out front AND back - 5 min

Bring your video permission slips!

Correct Factoring Trinomials ws (Wednesday - pink)

Wednesday

Name: Key Hr: _____

Factoring Trinomials Worksheet

Factor the trinomial whose leading coefficient is "1"

1. $t^2 + 8t + 12$
 $(t + 2)(t + 6)$

2. $m^2 - 7m + 12$
 $(m - 3)(m - 4)$

3. $n^2 - 3n - 18$
 $(n + 3)(n - 6)$

Factor the trinomial whose leading coefficient is NOT "1"

4. $3h^2 + 2h - 16$
 $3h^2 - 6h + 8h - 16$
 $3h(h - 2) + 8(h - 2)$
 $(h - 2)(3h + 8)$

5. $6c^2 + 7c + 2$
 $6c^2 + 3c + 4c + 2$
 $3c(2c + 1) + 2(2c + 1)$
 $(2c + 1)(3c + 2)$

6. $5p^2 - 22p + 8$
 $5p^2 - 20p - 2p + 8$
 $5p(p - 4) - 2(p - 4)$
 $(p - 4)(5p - 2)$

Factor the perfect square trinomial

7. $r^2 + 4r + 4$
 $(r + 2)^2$

8. $49z^2 - 56z + 16$
 $(7z - 4)^2$

9. $e^2 - 2cde + c^2d^2$
 $(e - cd)^2$

Factor Completely

10. $n^2 + 3n - 18$
 $(n + 6)(n - 3)$

11. $v^2 - 18v + 80$
 $(v - 8)(v - 10)$

12. $18z^2 + 9z + 1$
 $18z^2 + 6z + 3z + 1$
 $6z(3z + 1) + 1(3z + 1)$
 $(3z + 1)(6z + 1)$

13. $6x^2 + x - 15$
 $6x^2 - 9x + 10x - 15$
 $3x(2x - 3) + 5(2x - 3)$
 $(2x - 3)(3x + 5)$

14. $m^2 - 12m + 36$
 $(m - 6)(m - 6)$

15. $25v^2 + 30v + 9$
 $(5v + 3)^2$

16. $6c^2 - 10c - 4$
 $6c^2 - 12c + 2c - 4$
 $6c(c - 2) + 2(c - 2)$
 $(c - 2)(6c + 2)$

17. $x^2 + 7x - 44$
 $(x + 11)(x - 4)$

18. $w^2 + 24w + 144$
 $(w + 12)(w + 12)$
 $= (w + 12)^2$

19. $p^2 - p - 56$
 $(p - 8)(p + 7)$

20. $8m^2 - 10m + 3$
 $8m^2 - 6m - 4m + 3$
 $2m(4m - 3) - 1(4m - 3)$
 $(4m - 3)(2m - 1)$

21. $u^2 - 16u - 36$
 $(u + 2)(u - 18)$

22. $15y^2 - y - 2$
 $15y^2 - 5y + 4y - 2$
 $3y(5y - 2) + 1(5y - 2)$
 $(5y - 2)(3y + 1)$

23. $16m^2 - 24mn + 9n^2$
 $(4m - 3n)^2$

24. $6z^2 - 5z - 4$
 $6z^2 - 8z + 3z - 4$
 $2z(3z - 4) + 1(3z - 4)$
 $(3z - 4)(2z + 1)$

Questions on factoring review (Thursday - pink)

Factoring Review

Name: _____ Hr: _____

Factor Completely.**Factor the difference of squares**

1. $m^2 - 36$

2. $25b^2 - 4$

Factor out the greatest common factor

3. $18x^2 - 36xy$

4. $48r^2 - 4r$

Factor by grouping

5. $3x^3 - x^2 - 12x + 4$

6. $6x^2 + 2x + 6xy + 2y$

Factor the trinomials

7. $6x^2 + x - 15$

8. $x^2 - 9x + 36$

Factor completely

9. $a^2 - 121$

10. $x^2 - 5x - 6$

11. $6x^3 - 10x^2 + 3x - 5$

12. $2x^2 - 18$

13. $7x^2 - 112x$

14. $2x^2 - 5x - 12$

15. $4x^3 + 12x^2 - x - 3$

16. $x^3 + 5x^2 + 6x$

Solve the quadratic equations below

17. $4x^2 - 9$

18. $18x^2 + 9x + 1$

19. $3x^2 - 12x$

20. $x^2 - 12x + 36$

Work on today - go over Monday??

Math 2C Practice Final: Free Response

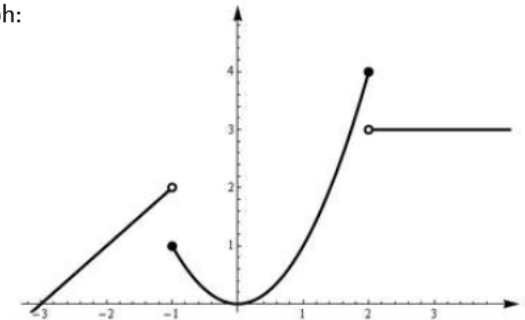
Name: _____

Hour: _____

Read all instructions completely. Show all of your work. No points will be given without appropriate work being shown and answers indicated.

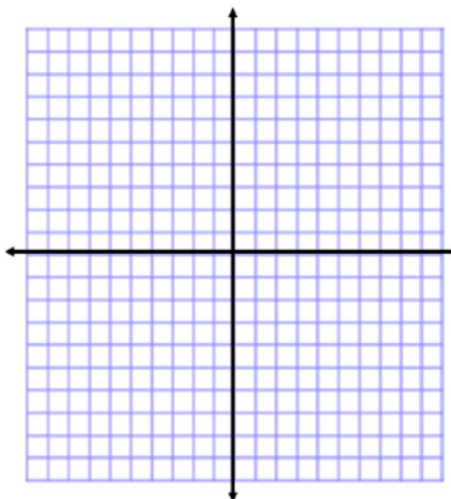
1. Write the piecewise function for the given graph:

$$f(x) = \left\{ \right.$$



2. Graph the given piecewise function:

$$f(x) = \begin{cases} \frac{1}{2}x - 1, & x < -2 \\ -x^2 + 2, & -2 \leq x < 1 \\ |x - 3|, & x \geq 1 \end{cases}$$



3. $f(-2) =$ _____ (1 point)

4. $f(1) =$ _____ (1 point)

5. Given the function: $f(x) = 3x^2 - 2$,
Find the average rate of change over the interval $[0, 5]$

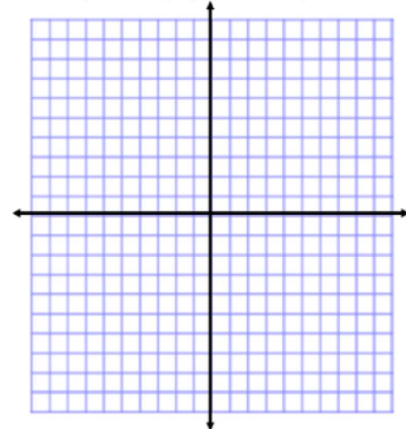
Average Rate of Change: _____

Solve the following system of equations, show all your work.

6. $y = -x^2 - 5$

$y = x^2 + 10x + 3$

(Use the graph if needed)

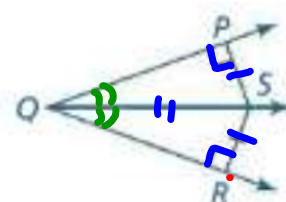
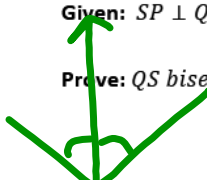


7. Organize and list the following statements and reason complete the following proof:

Statements	Reasons
QS bisects $\angle PQR$	Given
$\angle P \cong \angle R$	All right angles are congruent
$\triangle SQP \cong \triangle SQR$	HL
$SP \perp QP, SR \perp QR, SP = SR$	CPCTC
$\angle P \cong \angle R$	Reflexive
$\angle PQS \cong \angle RQS$	Definition of perpendicular
$\angle P$ and $\angle R$ are Right Angles	Definition of Angle Bisector

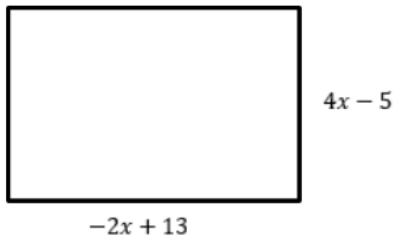
Given: $SP \perp QP, SR \perp QR, SP = SR$

Prove: QS bisects $\angle PQR$



	Statement	Reason
1	$SP \perp QP, SR \perp QR, SP = SR$	Given
2	$\angle P$ and $\angle R$ are right angles	Definition of \perp
3	$\angle P \cong \angle R$	All right \angle s are \cong
4	$QS \cong QS$	Reflexive Prop
5	$\triangle SQP \cong \triangle SQR$	HL
6	$\angle PQS \cong \angle RQS$	CPCTC
7	QS bisects $\angle PQR$	Def. of \angle Bisector

8. Given the rectangle below, write an expression **in standard form** that could represent the area of the rectangle.



9. A theme park has two rides side by side, The Joy Ride and Old Clunker. The Joy Ride is a calmer ride and Old Clunker is a fast roller coaster. The height, in feet, off the ground of the people on each ride can be modeled by the following equations, where t is time in seconds. The Joy Ride by the function $s(t) = -7.5t + 250$. Old Clunker by the function $f(t) = -4t^2 + 80t + 10$. How many times will the two rides be at the same height? At what time(s) will the two rides be at the same height? (Round to the nearest hundredth if needed) [Hint: draw a picture]

Use the following information to answer questions 10-15.

If a football is kicked straight upward, then the height $h(t)$ of the football (in feet) at time t (in seconds) is given by

$$h(t) = -16t^2 + 64t + 10.$$

10. What is the height of the football 4 seconds after it is kicked?
11. How long does it take for the football to return to earth (round to the nearest hundredth)?
12. How long does it take to reach the maximum height?
13. What is the maximum height?
14. What is the real world domain of the function?
15. What is the real world range of the function?

Use the chart to answer questions 16-19. Write answers as reduced fractions.

(H = Drinks Hot Chocolate, C = Drinks Cider, H' = Doesn't Drink Hot Chocolate, C' = Doesn't Drink Cider)

	Drinks Hot Chocolate	Doesn't Drink Hot Chocolate	Total
Drinks Cider	246	51	297
Doesn't Drink Cider	88	15	103
Total	334	66	400

16. What is the probability of choosing someone that drinks hot chocolate? $P(H)$

17. What is the probability of choosing someone that doesn't drink either? $P(H' \cap C')$

18. What is the probability of choosing someone that drinks cider given they drink hot chocolate? $P(C|H)$

19. What is the probability of choosing someone that drinks hot chocolate or cider? $P(H \cup C)$

