Pick Up the

WARM Up

HW Help

→

(A) Write the equation of a straight line that has a slope of $-\frac{3}{7}$ and a y-intercept of $(0,7)$.

$$y = \frac{-3}{7}x + 7$$

$$y = -\frac{3}{4}x + 7$$

$$y = mx + b$$

If absent from my class:

1. **Always check my blog for details, etc**

2. **Always check the Class Papers Basket for...**

3. **Ask for the solutions to the previously scored assignment so you can check your work, etc.**

1. $(x^2)^4 = $ X^8

3. $(2x^3)^3 = $ $8x^9$

5. $(-3x^2)^3 = $ $-27x^6$

7. $(\underline{5x^3})^2 = 25x^6$ $(-5x^3)^2$

9. $(\underline{2x^2 y})^3 = 8x^6y^3$

11. $(x^2y)^{\underline{3}} = x^6y^3$

13. $(-2xy)^{\underline{4}} = 16x^4y^4$

1. $(x^2)^4 =$ _____ x^8

3. $(2x^3)^3 =$ _____ $8x^9$

     2^3

5. $(-3x^2)^3 =$ _____ $\boxed{-27x^6}$

7. $(\underline{5x^3})^2 = 25x^6$

     $(-5x^3)$

9. $(\underline{2x^2y})^3 = 8x^6y^3$

11. $(x^2y)\underline{^3} = x^6y^3$

13. $(-2xy)\underline{^4} = 16x^4y^4$

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2. $(x)^2 =$ _____

4. $(-2x)^5 =$ _____

6. $(-4x^2)^3 =$ _____

8. $(\underline{\quad\quad})^2 = 64x^8$

10. $(\underline{\quad\quad})^3 = -8x^3$

12. $(3x^2y^3)\underline{\quad} = 81x^8y^{12}$

14. $(6x^3y^4)\underline{\quad} = 36x^6y^8$

2. $(x)^2 = \underline{x^2}$

4. $(-2x)^5 = \underline{-32x^5}$

6. $(-4x^2)^2 = \underline{16x^4}$

8. $(\underline{8x^4 \atop -8})^2 = 64x^8$

10. $(\underline{-2x})^3 = -8x^3$

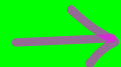12. $(3x^2y^3)^{\underline{4}} = 81x^8y^{12}$

14. $(6x^3y^4)^{\underline{2}} = 36x^6y^8$

Starting today you will evaluate your OHW using the Rubric.

After going over questions in class, write your score, in ink, on
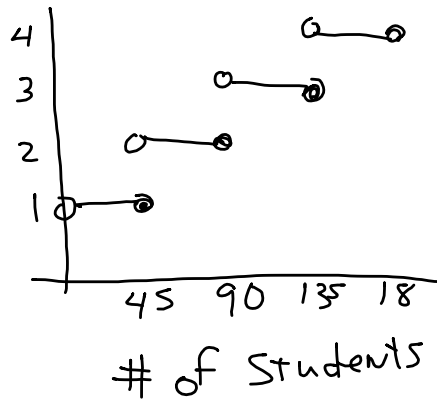
(a) Your paper
(b) The Recording Sheet →

(5)

$g(x) = \sqrt{x-5}$

•

$h(x) = x^2 - 6$

a. ●   b.

6

$h(x) = x^2 - 6$

$h(6) = 6^2 - 6 = 30$

$g(x) = \sqrt{x-5}$

$g(30) = \sqrt{30-5} =$

5

-5 ?

$$y = 3x - 5$$

y

x

Temp

Time

---
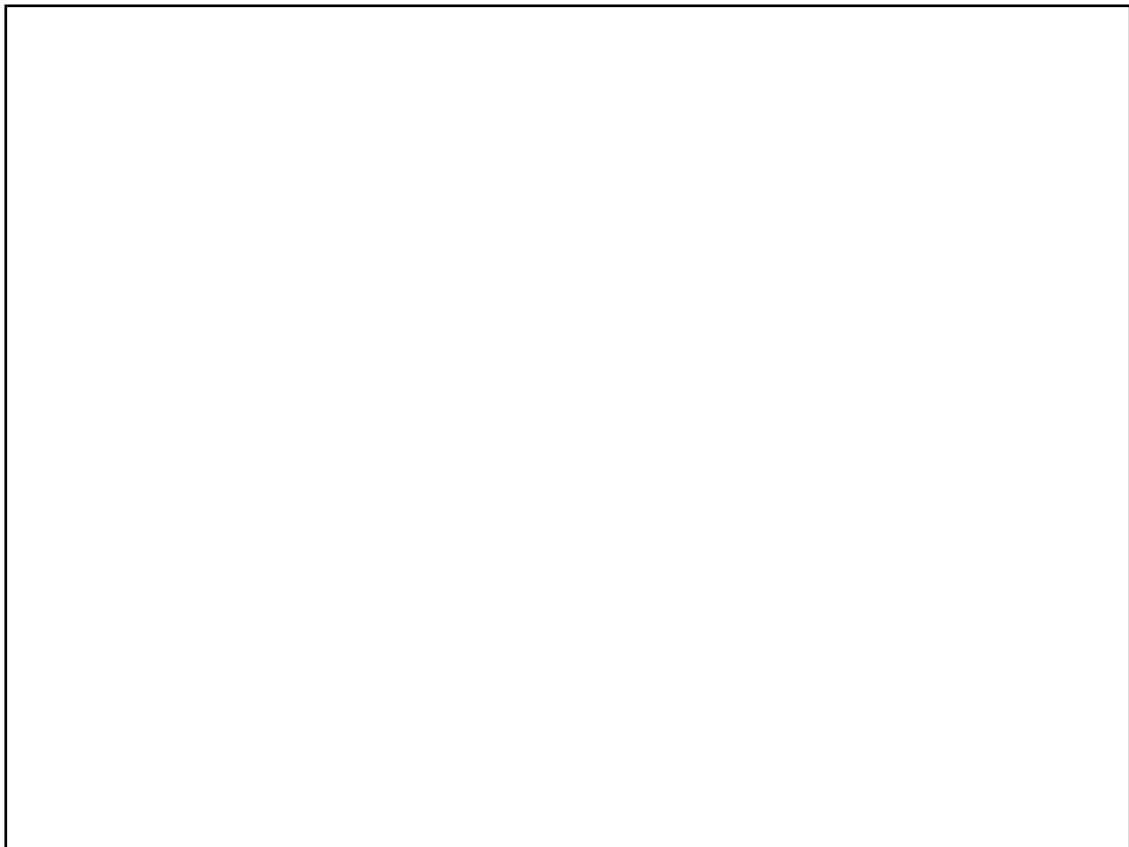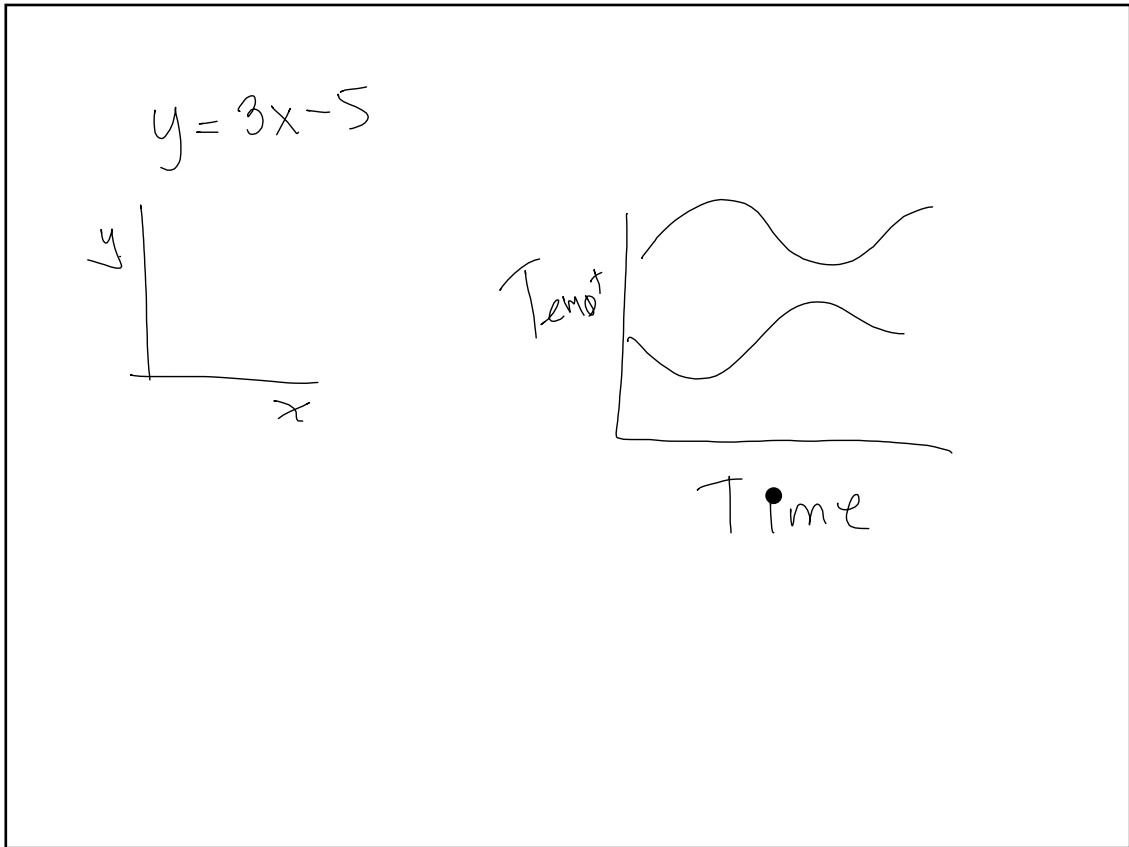
(8) a) Not linear
     b) the exponent
     c) A parabola
_____

(9) $y = mx + b$ is a straight line.
     b represents the y-intercept and
     m is the slope.
     x is the input, y the outputs

21 d $f(x) = -\frac{2}{3}x + 3$ $g(x) = 2x^2 - 5$

(a) $f(3) = -\frac{2(3)}{3(1)} + 3 = 1$

(d)   Solve $g(x) = -7$ $-7 = 2x^2 - 5$
                                 $+5 \qquad\qquad +5$

$$-2 = 2x^2$$

$$-1 = x^2$$

$$\sqrt{} \quad \sqrt{}$$

$$= x$$

7d) $y = x^2$ 7ad

x	y
-1	1
-2	4
0	0
1	1

~~7a-d~~

Remember to keep <u>all</u> completed HW assignments near your recording sheet and always have them in class.

Goals Today

① Use the ZERO PRODUCT PROPERTY

② Use Graphing Calculators to analyze functions and make "Complete" Graphs.

Product of factors

do we know anything about the factors?

$$3 \cdot 7 = 21$$

$$2 \cdot b = 10$$

$$a \cdot b = 24$$

$$a \cdot b = 0$$

if $a \cdot b = 0$
then $a = 0$ or $b = 0$

ZPP

3 Examples

Solve each quadratic equation using the zero product property

a) $(3x-4)(2x-5) = 0$

ZPP

$3x-4=0$ $2x-5=0$

$3x=4$ $2x=5$

$x=\dfrac{4}{3}$ $x=\dfrac{5}{2}$

$x=2.5$

b) $n^2 + 8n = 0$ NO FACTORS, Yet

$n(n+8) = 0$

ZPP

$n=0$ $n+8=0$

$n=-8$

c)

$$4x^2 - 11x - 3 = 0$$

$$(x - 3)(4x + 1) = 0$$

ZPP

$x - 3 = 0$ $4x + 1 = 0$

$\boxed{x = 3}$ $4x = -1$

$\boxed{x = -\frac{1}{4}}$

$$(4x + 1)(x - 3) = 0$$

zero product property

First × Last

	4x	1
x	$4x^2$	x
-3	$-12x$	-3

First: $4x^2$
Last: -3

$-12x^2$ → $12x \cdot -x$
                $-12x \cdot x$
                $6x \cdot -2x$
                $-6x \cdot 2x$
                $4x \cdot -3x$
                $-4x \cdot 3x$

$-11x$ middle
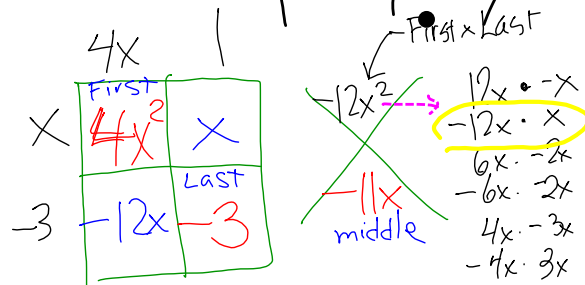
$$-12x + x$$

In Algebra 1 you learned about the multiple representations of functions:

0	1
−1	4
1	0
2	3

$$y = x^2 - 2x + 1$$
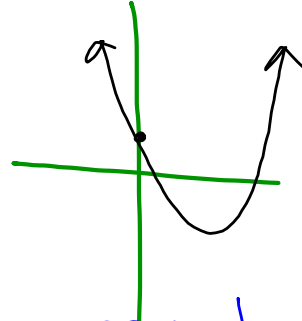
TABLE   EQUATION   GRAPH

& Situations

TODAY'S AIM:

Use graphing calculators to

⊙ make "Complete Graphs"

⊙ Analyze functions

- have one person get a GDC for each person in your group.

- the same person will return <u>all</u> of them.

==FORMAT==

==Home Screen==

5^2

7^3

$\left(8^3 - 7^2\right)^3$

$-(-3)^2 + 7(4) - 3$

$\sqrt{4900}$

$\sqrt[3]{125}$

$Y =$

$3x + 2$

$-2x^2 + 3x + 1$

when finished

✓ clear $Y =$

✓ turn off

In your Notes

will need a half
piece of graph paper

$y = 2\sqrt{9-x} - 4$
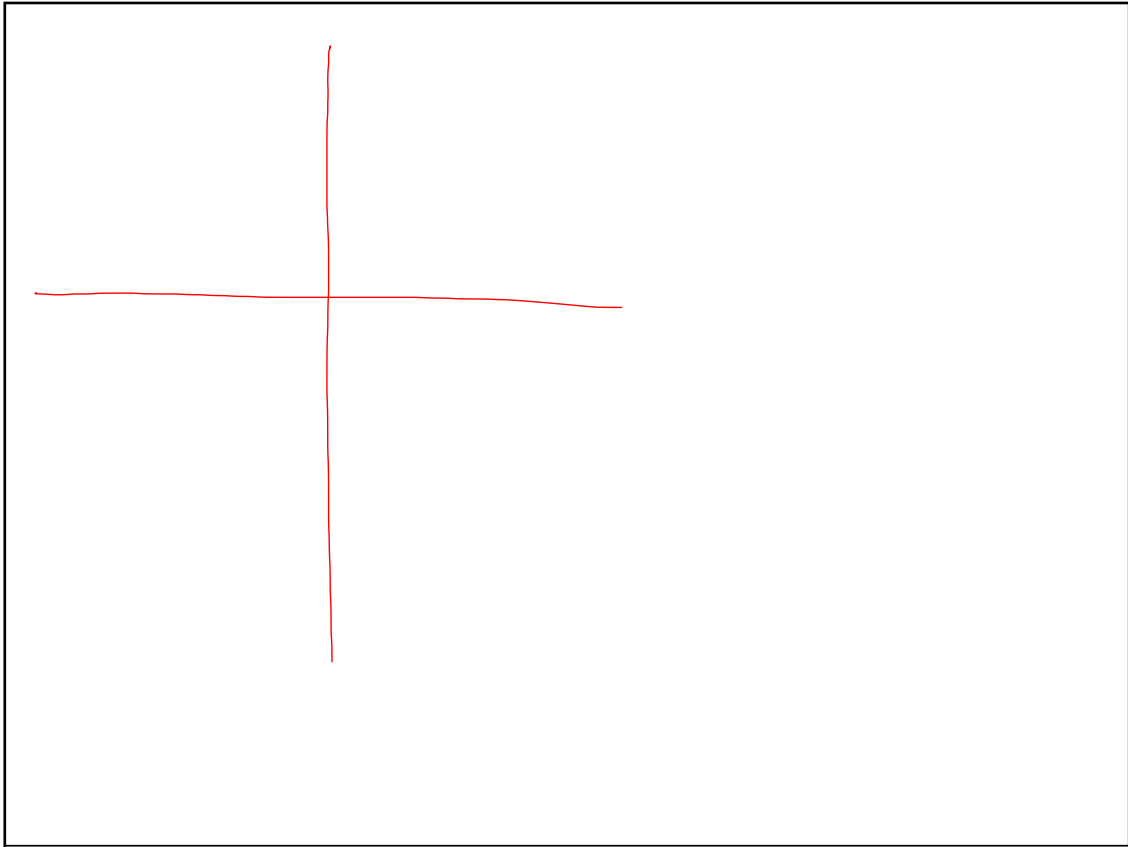
1. What are the locations of key points ?

2. What is the domain ?

3. Is there a maximum or minimum y-value ?
    If so, what is it?

4. Can we identify **5** integer inputs and their
    outputs ?   (five graphing friendly points)
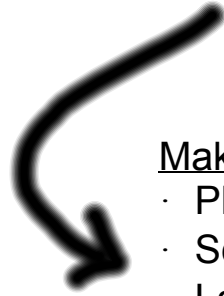
Make a Complete on Graph Paper
· Plot points accurately
· Scale axis appropriately
· Label key points

domain: $-\infty < x \leq 9$

range: $-4 \leq y < \infty$

(9, -4)

___ ☆ ☆ ___   _____
Rows   *Pods of 3 to 4*   **Strong** preference for **rows**

___ ☆ ___   _____
Rows   *Pods of 3 to 4*   Slight preference for **rows**

_____ ☺   _____
Rows   *Pods of 3 to 4*   I'm flexible

_____   ___ ☆ ___
Rows   *Pods of 3 to 4*   Slight preference for **pods**

_____   ___ ☆ ☆ ___
Rows   *Pods of 3 to 4*   **Strong** preference for **pods**

If your group is selected, everyone must contribute to the presentation in some way.

Including at least one Statement starting with

"At first we were confused by..."

"This makes sense because..."

"We weren't sure about..., so we tried..."

"Something interesting that we noticed about our graph is..."

1- 13bdf, 15-17, 20, 25

If you want a challenge, you can do #22 instead of #25

p df
save

if you were absent yesterday,

please see me about a short

Pre-test we took yesterday

Avoid the cycle of des

If you are struggling with the work, don't leave school that day unless you get help <u>or</u> come in early the next day.