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).

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

$y = mx + b$

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

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

5. $(-3x^2)^3 =$ _____

7. (_____)$^2 = 25x^6$

9. (_____)$^3 = 8x^6y^3$

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

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

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

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

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

7. $(\quad)^2 = 25x^6$ $5x^3$ or $-5x^3$

9. $(\quad)^3 = 8x^6y^3$ $2x^2y$

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

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

2. $(x)^2 =$ _____

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

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

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

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

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

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

2. $(x)^2 = __x^2__$

4. $(-2x)^5 = __-32x^5__$

6. $(-4x^2)^2 = __16x^4__$

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

10. $(-2x__)^3 = -8x^3$

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

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

Starting today you will evaluate your HW using the Rubric.

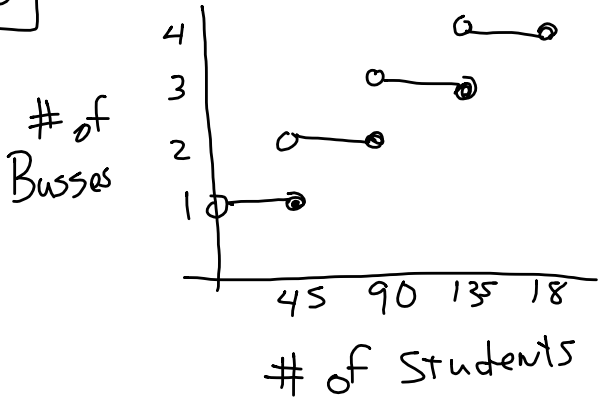
After going over questions in class, write your score, in ink, on

(a) Your paper
(b) The Recording Sheet

→

Questions on the HW?

1-6



(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 ?

(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

1. $y = x^2$

- **1-8.** The graph for part (d) of problem 1-7 is different from the other three graphs. Homework Help

1. Explain how the graph is different from the other three graphs.
2. What in the equation of part (d) makes its graph different?
3. What is the graph of part (d) called?

(8)

1. When you graph an equation such as $y = 3x - 5$, which variable (the x or the y) *depends* on the other? Which is not dependent? (That is, which is *in*dependent?) Explain.

2. Which variable is *dependent*: temperature or time of day? Which variable is *independent*?

3. Sketch a graph (with appropriately named axes) that shows the relationship between temperature outside and time of day.

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

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

(d) Solve $g(x) = -7$

$-7 = 2x^2 - 5$

$+5 \quad +5$

$-2 = 2x^2$

$-1 = x^2$

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

$= x$

7d) $y = x^2$

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

7acd

~~7a-d~~

Remember to keep all 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

$3 \cdot 7 = 21$

$2 \cdot b = 10$

$a \cdot b = 24$

do we know anything about the factors?

$a \cdot b = 0$

ZPP

Zero Product Property

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

3 Examples

Solve each quadratic equation using the zero product property

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

$a \cdot b = 0$

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

$3x=4$ $\quad$ $2x=5$

$x=\frac{4}{3}$ $\quad$ $x=\frac{5}{2}$

$x=2.5$

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

$6x^2-13x+20=0$

b) $n^2+8n=0$

NO FACTORS, Yet

$n(n+8)=0$

$a \cdot b = 0$

$n=0$ $\quad$ $n+8=0$

$n=-8$

$\frac{n^2}{n} = \frac{-8n}{n}$

$n=-8$

c)

zero product property

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

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

ZPP

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

$4x=-1$

$x=\frac{-1}{4} \quad x=3$

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

$-12x^2 \rightarrow -12x \; x$

$12x \; -x$

$6x \; -2x$

$-6x \; 2x$

$4x \; -3x$

$-4x \; 3x$

$-11x$

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

B.B.

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

0	1
-1	4
1	0
2	3

$y = x^2 - 2x + 1$

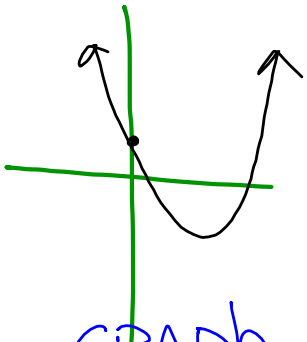


TABLE EQUATION GRAPH

+ 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 all of them.

FORMAT

Home Screen

5^2

7^3

$(8^3 - 7^2)^3$

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

$\sqrt{4900}$

$\sqrt[3]{125}$

Y =

$3x+2$

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

Sketch

When finished

- ✓ clear Y =
- ✓ turn off

In your Notes

will need a half piece of graph paper

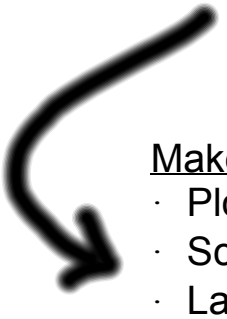
$$y = 2\sqrt{9-x} - 4$$

1. What are the locations of key points ?

2. What is the domain ?

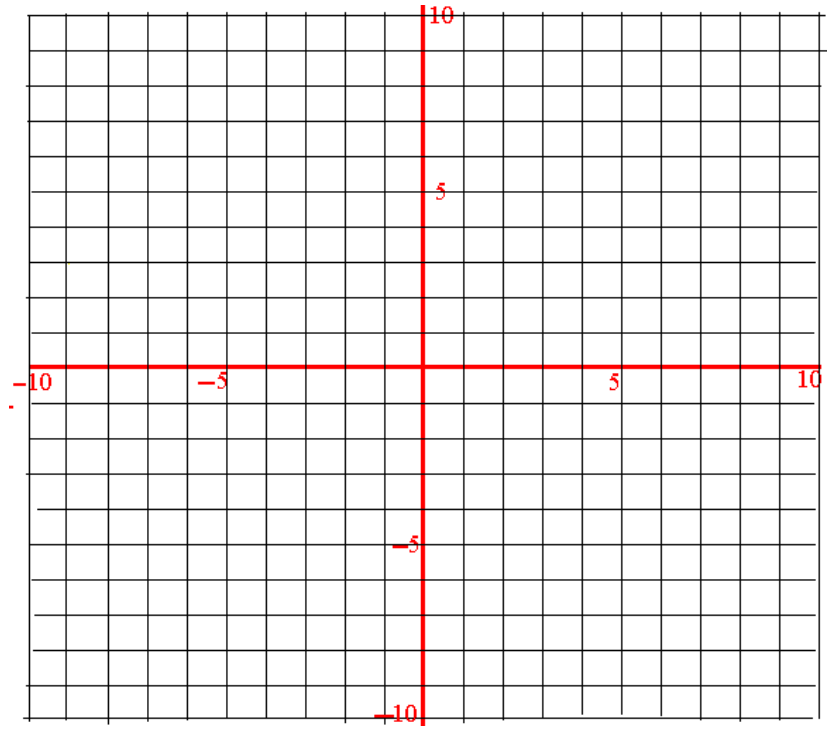
3 Is there a maximum or minimum y-value ?
If so, what is it?

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



☆ ☆ 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..."

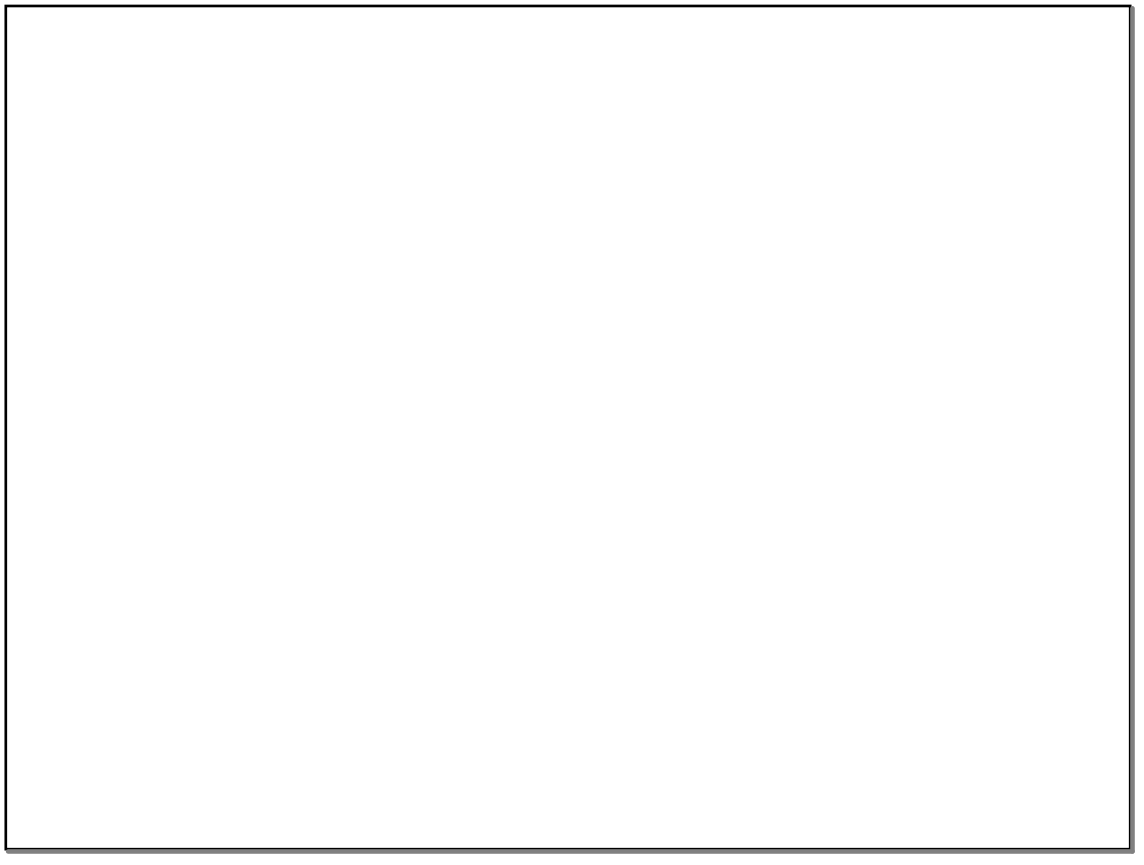
"Something interesting that we noticed about our graph is..."

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

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

pdf
save

if you were absent yesterday,
please see me about a short
Pre-test we took yesterday

Avoid the cycle of destruction.

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