Aim Graphing

inear Eqns

- Direct

$y = x$

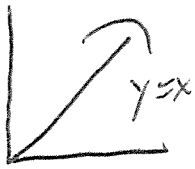
one goes up
other goes up

Inverse

$y = 1/x$

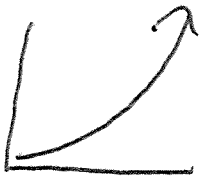
one goes down (y)
x goes up

- Linear vs. Quadratic / Exponential

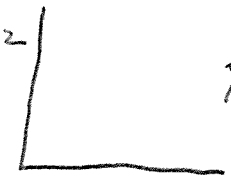


$y = x$

$y = 1/x$



$y = x^2$



$y = 1/x^2$

- Do not use X & Y, use what they represent

Graphing

- Plot Points
- Line of Best Fit (Not point to pt)
- Use <u>new</u> points on line to determine new eqn.
- Points must be half the length of the line

Displaying Data / Graphing

Driving a Car - See object, need to stop

Ind. Speed ~~(mph)~~	Rxn Dist. (~~miles~~) m Dep
25	27
35	38
45	49
55	60
65	71

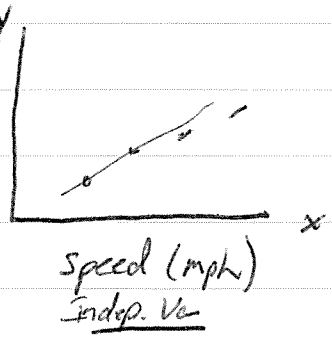
Indep. Var Dep. Variable

~~Indep Variable~~ - (X-Axis)
Quantity Varied by the experimenter

Dependent Variable (Y-Axis)
Result of the experiment

Dep Var

Graph



Linear Eqn
$y = mx + b$

Slope $= \frac{\Delta Y}{\Delta X}$

$b =$

1 Physics Skill

NAME _____

37. Which graph represents an inverse relationship? _____

38. Which of the graphs could have the equation $y = kw^2$? _____

39. Plot a graph of the data given in the following table.

x	y
0	2
0.5	8
1	14
2	26
3	38
4	50

40. What is the slope of the line? _____

41. What is the value of y when $x = 4$? _____

42. What is the value of y when $x = 6$? _____

43. What is the value of x when $y = 0$? _____

Checklist for Mathematics Assessment

Topic assessment (problems)	Actual score	Possible score	Text reference	Problem assignment
Scientific notation 1–8		8	Chapter 2 Section 2.1	Practice Problems 1–3 Chapter Review Problem 1
Using exponents 9–16		8	Chapter 2 Section 2.1	Practice Problems 6–11 Chapter Review Problem 3
Significant digits 17–24		8	Chapter 2 Section 2.2	Practice Problems 12–17 Chapter Review Problems 5–10
Solving equations algebraically 25–28		4	Chapter 2 Section 2.4	Practice Problems 18–22 Chapter Review Problems 21, 27
Metric units 29–32		4	Chapter 2 Section 2.1	Practice Problems 4–5 Chapter Review Problem 2
Trigonometric functions 33–6		4	Chapter 6 Section 6.2	Practice Problems 11–16 Chapter Review Problems 21–27
Graphing 37–43		7	Chapter 2 Section 2.3	Chapter Review Problems 17–19
TOTAL		43		

Physics Skill 7

Unit

$$\frac{\frac{Kg\,m}{s^2}}{\frac{m}{s^2}} = \frac{Kg\,m}{s^2} \cdot \frac{s^2}{m}$$

b. Slope $= \frac{\Delta y}{\Delta x}$ $\frac{24}{15} = 1.6\ Kg$

c. Kg

d. 24 N

(1)

e. Eqn $y = 1.6x + 0$

or

Force $= 1.6$ accel $+ 0$

$50 = 1.6\ x + 0$

$31.25 = x$

$31.25 =$ accel.