

BE-1A

MONDAY 1-22-07

SOLVE

① $x - 12 = 14$

② $y = -5y + 18$

Solve for y

③ $-2x + y = 4x + 3$

Solve for l , A is the AREA of a rectangle.

④ $A = lw$

⑤ WHAT is different about the equations in ①, ② compared to ③, ④?

①

RECALL THE DEFINITION OF A RELATION.

RELATION - A SET OF ORDERED PAIRS

A function is A SPECIAL RELATION.

function - A RELATION WHERE EACH X
ONLY goes to ONE Y .

EX) $(2, 5)$
 $(3, 6)$
 $(4, 7)$
 $(1, -2)$

FUNCTION

$(2, 5)$
 $(3, 6)$
 $(4, 7)$
 $(2, -2)$

NOT A FUNCTION
 $X = 2$ is going to TWO Y .

X is the "independent variable"

X "drives" - pick X , find Y .

Y depends on X , it is the dependent variable.

②

FUNCTIONS CAN BE SHOWN AS EQUATIONS,
GRAPHING, TABLES, MAPPING, ETC.

IDENTIFY THE FOLLOWING AS FUNCTIONS
OR "NOT" FUNCTIONS:

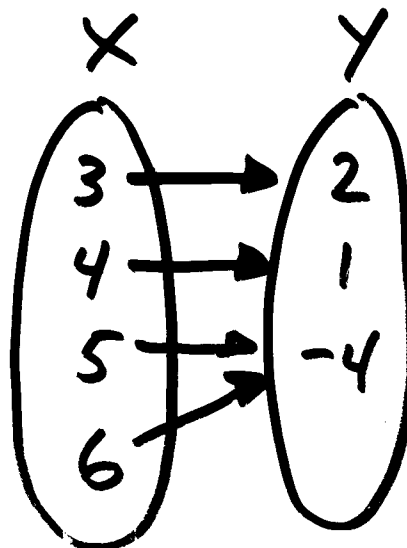
X	Y
-2	8
-1	6
0	4
1	2
2	0

X	Y
-2	8
-1	6
0	4
1	8
2	6

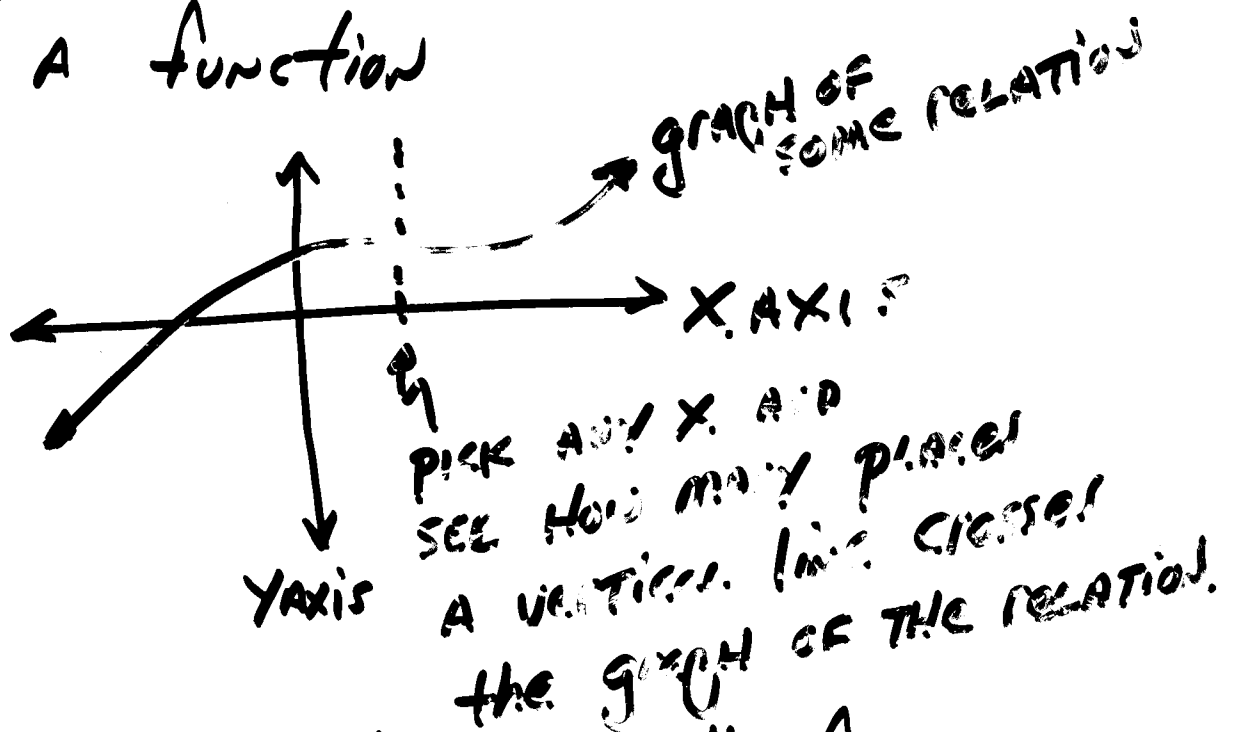
X	Y
-2	4
-1	4
0	4
1	4
2	4

It is OK for
different X's to
go to the same Y,
as long as each
X only goes to ONE Y.

X	Y
-2	-16
-1	-12
0	-8
1	-6
2	-2
-2	-4



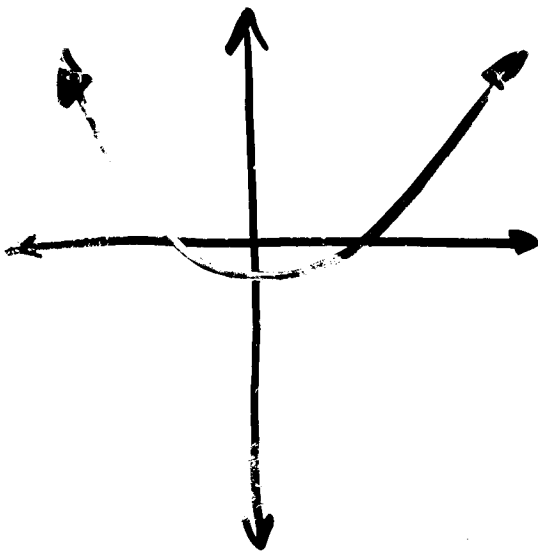
③ If you graph a relation, it is
EASY TO SEE WHETHER OR NOT it
is a function



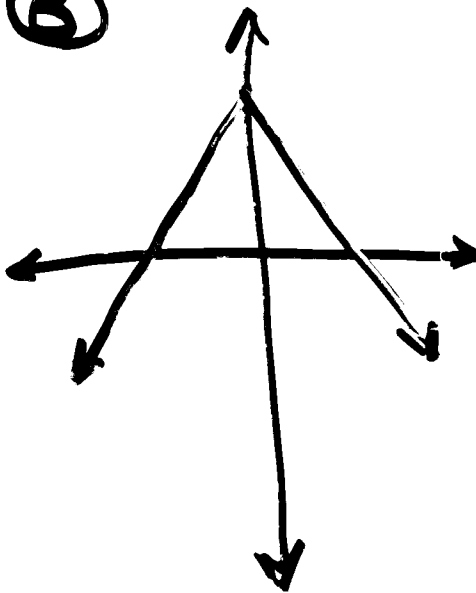
"VERTICAL LINE TEST" FAMOUS IN
ALGEBRA !!

Function - Yes or No

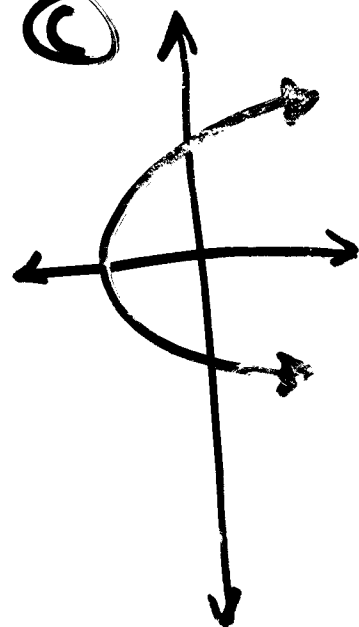
①



②



③



METHOD OF INTERCEPTS

AN ADVANTAGE OF THE STANDARD FORM IS THAT YOU CAN GRAPH LINEAR EQUATIONS EASIER THAN THE "5 VALUES OF X, Y-TABLE" METHOD USING THE "INTERCEPTS" METHOD.

EX) GRAPH $3x + 2y = 9$

$X_{\text{INT}}, y = 0$

$$3x + 2(0) = 9$$

$$\frac{3x}{3} = \frac{9}{3}$$

$$x = 3$$

X_{INT}

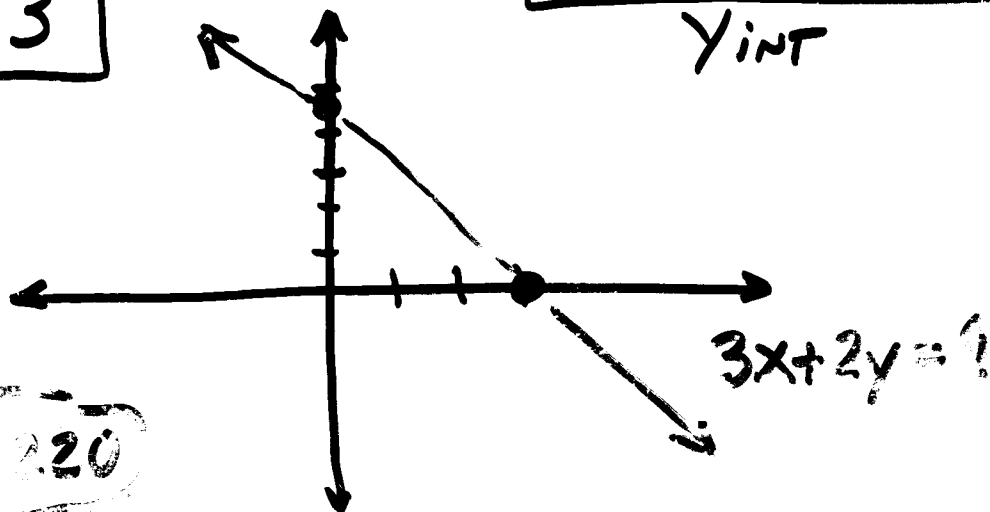
$Y_{\text{INT}}, x = 0$

$$3(0) + 2y = 9$$

$$2y = 9$$

$$y = \frac{9}{2} = 4\frac{1}{2}$$

Y_{INT}



EX 4P, 220

GRAPH USING THE METHOD OF
INTERCEPTS:

① $5x + 10y = 15$

② $6x - y = 12$

③ $4x - 20 = -5y$  PUT IN
STANDARD
FORM

Identifying functions:

Pg. 229 # 4-9

Homework: • Read Ch. 4-6

• Pg 229 # 17-27.

• Plus: Graph $3x + 9y = 18$
USING METHOD OF INTERCEPTS.