

099 §35 #s 1-17, 19-22, 23-29, 33
All

#s 1-8 Give Domain, Range, & indicate which are functions

① $\{(1,2), (3,4), (5,6), (7,8)\}$

$D = \{1, 3, 5, 7\}$

$R = \{2, 4, 6, 8\}$

IS Func.

③ $\{(2,5), (3,4), (1,4), (0,6)\}$

$D = \{2, 3, 1, 0\}$

$R = \{5, 4, 4, 6\} = \{5, 4, 6\}$

Redundant

IS Func.

⑤ $\{(a,3), (b,4), (c,3), (d,5)\}$

$D = \{a, b, c, d\}$

$R = \{3, 4, 5\}$

IS Func.

⑦ $\{(2,1), (2,2), (2,3), (2,4)\}$

$D = \{2\}$

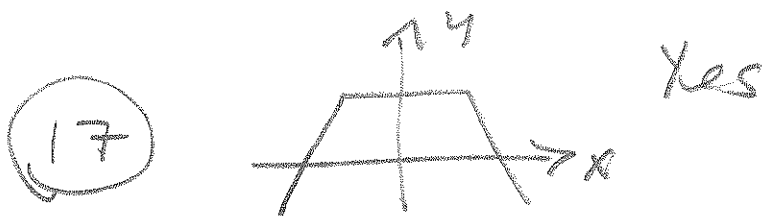
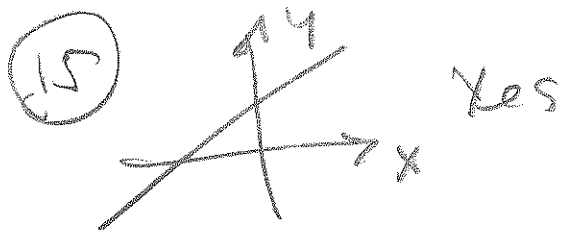
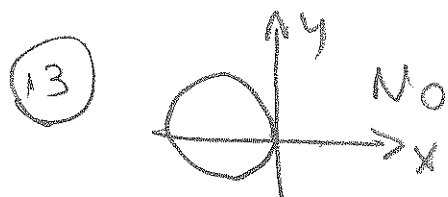
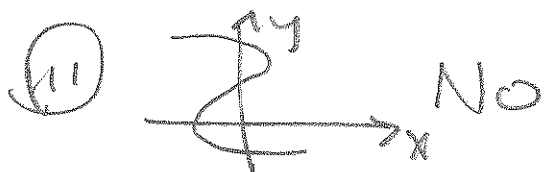
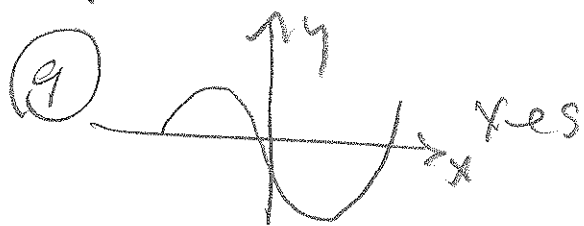
$R = \{1, 2, 3, 4\}$

is NOT function

$x=2$ is 4-timing!

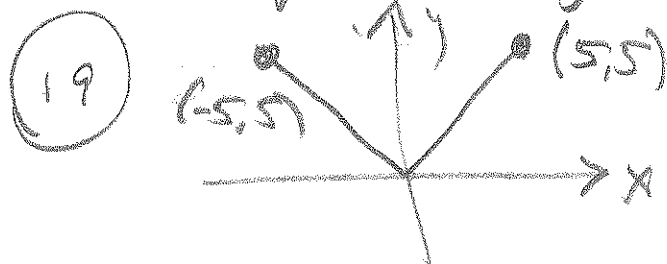
699 §3.5 #5 9-17, 19-22, ~~23-29~~, 33
All

#5 9-14 state whether or not the graph represents a function



#5 19-22 Determine Domain and range.

Assume you're seeing all of it.

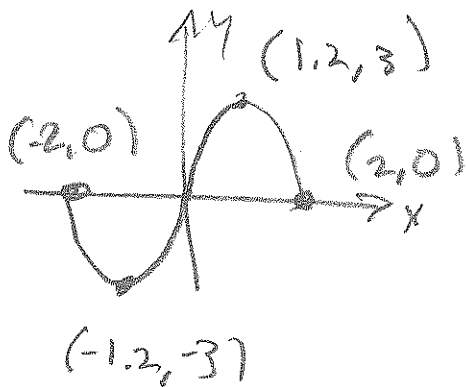


$$D = [-5, 5]$$

$$R = [0, 5]$$

099 #s 20, 21, 22, 23-29, 33

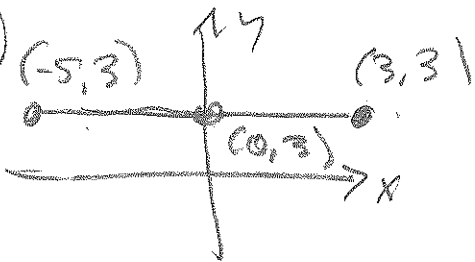
20



$$D = [-2, 2]$$

$$R = [-3, 3]$$

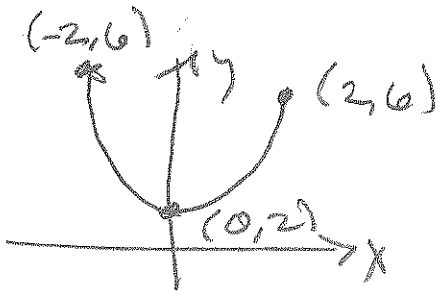
21



$$D = [-5, 3]$$

$$R = \{3\}$$

22

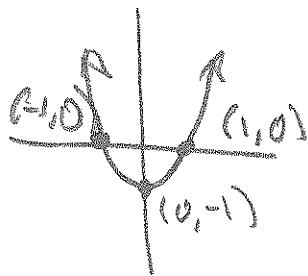


$$D = [-2, 2]$$

$$R = [2, 6]$$

#s 23-32 Graph. Use graph for domain and range. Indicate if it's a function.

23 $y = x^2 - 1$



$$D = (-\infty, \infty)$$

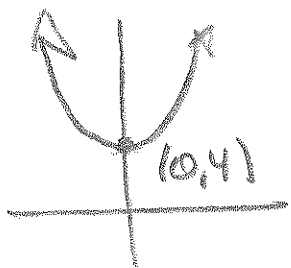
$$R = [-1, \infty)$$

IS Func.

099 § 3.5 # 25-29, 33

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$$y = x^2 + 4$$



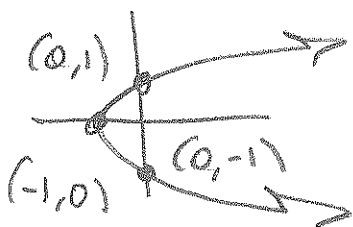
$$D = (-\infty, \infty)$$

$$R = [4, \infty)$$

IS Func.

27

$x = y^2 - 1$!? Not covered!



$$D = [-1, \infty)$$

$$R = (-\infty, \infty)$$

NOT

Func.

$$y^2 - 1 = x$$

$$y^2 = x + 1$$

$$\sqrt{y^2} = \sqrt{x+1}$$

$$|y| = \sqrt{x+1}$$

New! Bonus!

$$y = \sqrt{x+1}$$

OR

$$y = -\sqrt{x+1}$$



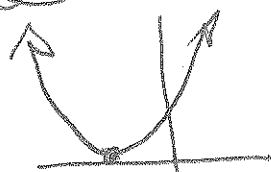
29

$$y = (x+2)^2$$

is graph of

$y = x^2$ moved to the left

2 units.



(-2, 0)

$$D = (-\infty, \infty)$$

$$R = [0, \infty)$$

Func.
IS

$$f(x) = x^2$$

$$f(x+2) = (x+2)^2$$

Left 2.

099 § 3.5 # 33

(33) Job pays $8.5 \frac{\$}{\text{hr}}$. You work anywhere between 0 & 40 hrs per week

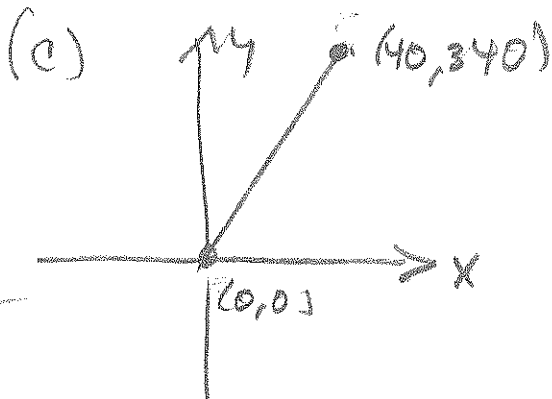
~~Then~~ Let $x = \#$ of hours worked per week $\left(\frac{\text{hrs}}{\text{wk}}\right)$
 $y = \text{amt of money per week} \left(\frac{\$}{\text{wk}}\right)$

(a)

Then $y = 8.5x$ and $0 \leq x \leq 40$

(b) Complete the table

Hours	Function Rule	Gross Pay
x	$y = 8.5x$	y
10	$(8.5)(10)$	85
20	$(8.5)(20)$	170
30	$(8.5)(30)$	255
40	$(8.5)(40)$	340



(d)
 $D = [0, 40]$
 $R = [0, 340]$

(e) Min Amt/week is \$0
Max Amt/week is \$340