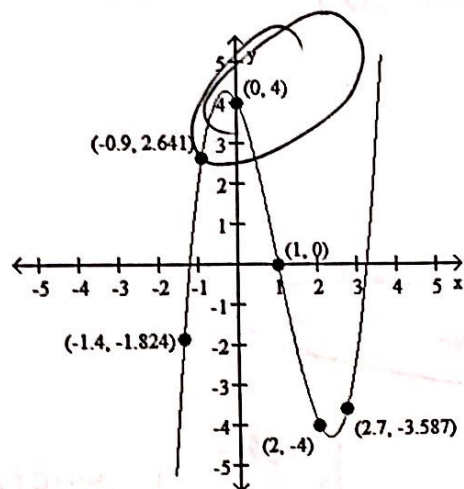


Intro Quiz 2.2 and 2.4 Examples

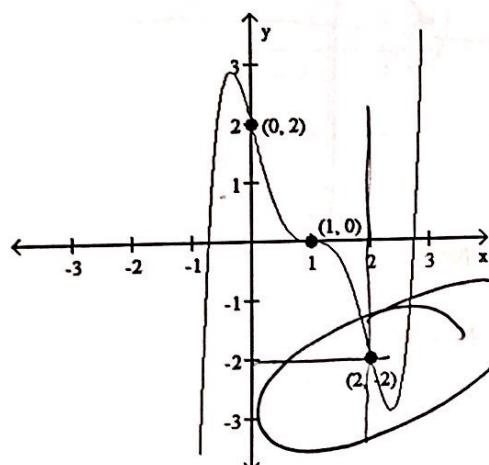
- 1 pt 1) A graph of a function f is shown below. Find $f(0)$.



what is the "y"?

$$y = 4$$

- 1 pt 2) A graph of a function f is shown below. Find $f(2)$.

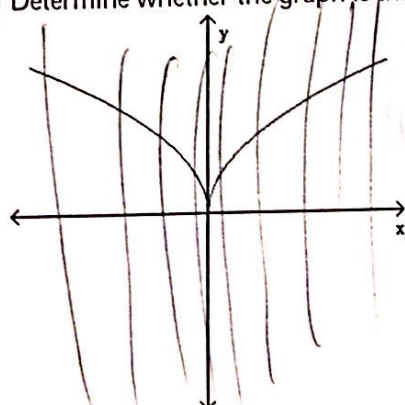


$$y = -2$$

~~$f(2) = 2 \times 2 + 3$~~

~~$y = 2x + 3$~~

- 1 pt 3) Determine whether the graph is the graph of a function. Answer with function or not a function.

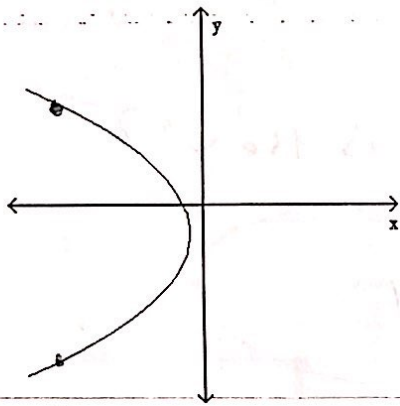


function

Determine whether the graph is the graph of a function.

4)

1 pt

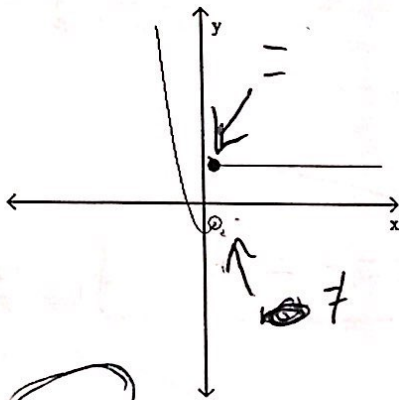


Not a function

A) Yes

B) No

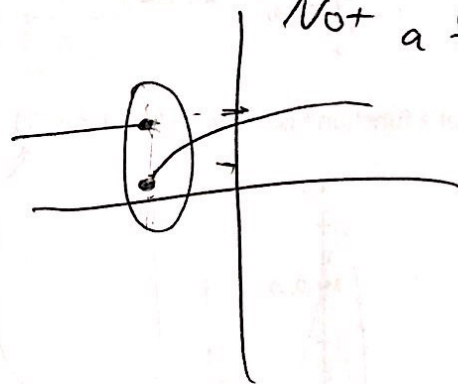
1 pt 5)



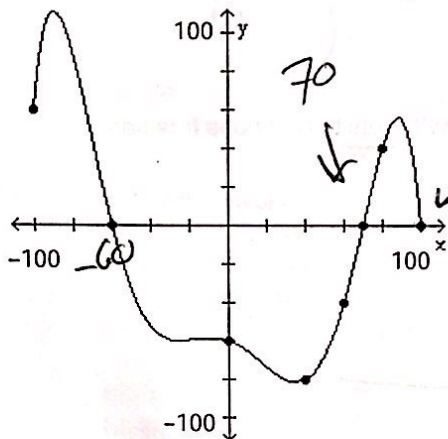
A) Yes

B) No

Not a function



1 pt 6) The graph of a function f is given. Use the graph to answer the question.
What are the x-intercepts? (x, y)

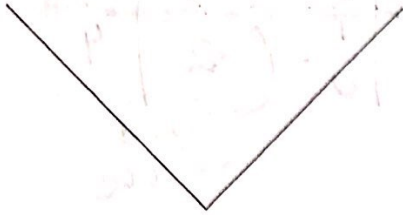


$(100, 0)$
 $(70, 0)$
 $(-60, 0)$

Match the graph to the function listed whose graph most resembles the one given.

7)

(1 pt)

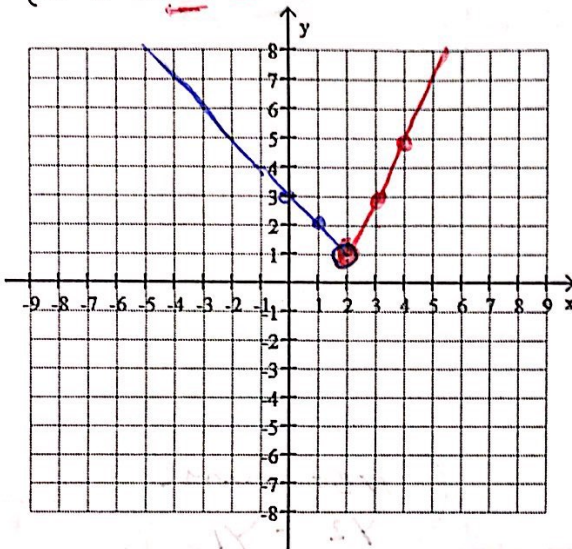


- A) square function
- C) linear function

- B) reciprocal function
- D) absolute value function

8) Graph the function.

$f(x) = \begin{cases} -x + 3 & \text{if } x < 2 \\ 2x - 3 & \text{if } x \geq 2 \end{cases}$



open circle

x	y
2	1
1	2
0	3

closed circle

x	y
2	1
3	3
4	5

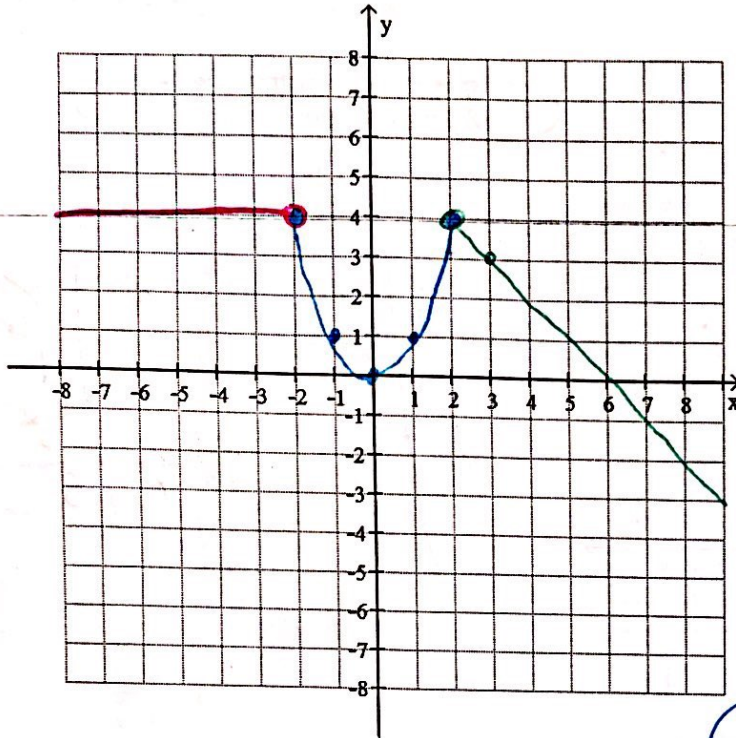
3pts 9) Graph the function.

$$f(x) = \begin{cases} 4 & ; \text{if } x < -2 \\ x^2 & ; \text{if } -2 \leq x \leq 2 \\ -x+6 & ; \text{if } x > 2 \end{cases}$$

x	y
-2	4
-3	4
-4	4

x	y
-2	4
-1	1
0	0

x	y
1	1
2	4



x	y
2	4

net change
 $y_2 - y_1$

1pt 10) Find the net change for the function between the given values.

$$f(x) = 2x - 4; \text{ from } 1 \text{ to } 2$$

$x_1 \quad x_2$

$$f(1) = 2(1) - 4 = -2$$

$$f(2) = 2(2) - 4 = 0$$

$f(b)$

1pt 11) Find the average rate of change for the function between the given values.

$$f(x) = x^2 + 3x; \text{ from } 1 \text{ to } 6$$

$$0 - (-2) = 2$$

1pt 12) Find the average rate of change for the function between the given values.

$$f(x) = \sqrt{2x}; \text{ from } 2 \text{ to } 8$$

$$f(2) = \sqrt{2(2)} = 2$$

$$f(8) = \sqrt{2(8)} = 4$$

2pt 13) Along with incomes, people's charitable contributions have steadily increased over the past few years. The table below shows the average deduction for charitable contributions reported on individual income tax returns for the period 1993 to 1998. Find the average rate of change between 1995 and 1997.

Year	Charitable Contributions
1993	\$1660
1994	\$2350
1995	\$2500
1996	\$2780
1997	\$3010
1998	\$3120

$$3010 - 2500$$

$$\frac{1997 - 1995}{2} = \frac{510}{2} = 255$$

$$\frac{4 - 2}{8 - 2} = \frac{2}{6} = \frac{1}{3}$$

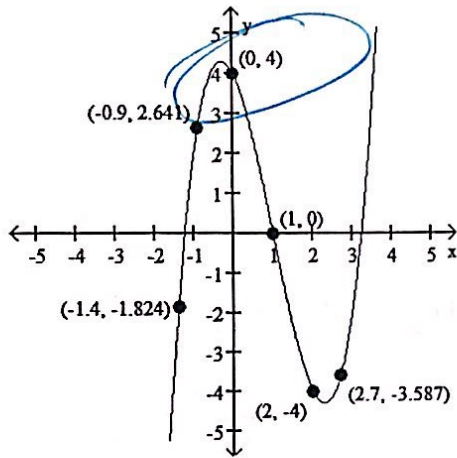
A) \$330 per year

B) \$510 per year

C) \$255 per year

D) \$310 per year

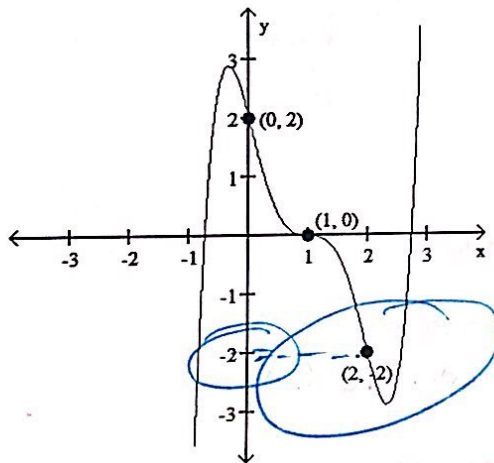
- 1 Pt 1) A graph of a function f is shown below. Find $f(0)$.



↑ x what ~~y~~
is y when $x=0$

$$y = 4$$

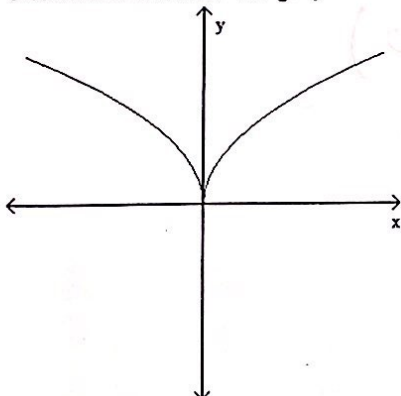
- 1 Pt 2) A graph of a function f is shown below. Find $f(2)$.



↑ x

$$y = -2$$

- 1 Pt 3) Determine whether the graph is the graph of a function. Answer with function or not a function.



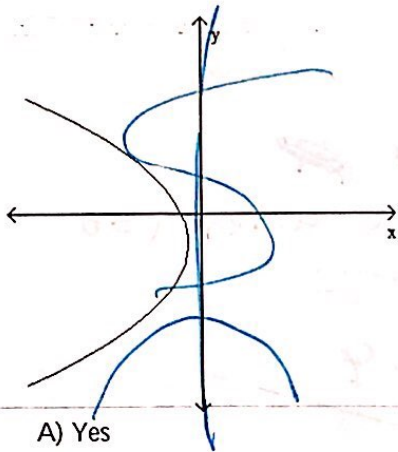
vert. line test

Function

Determine whether the graph is the graph of a function.

4-5 (vert. line test)

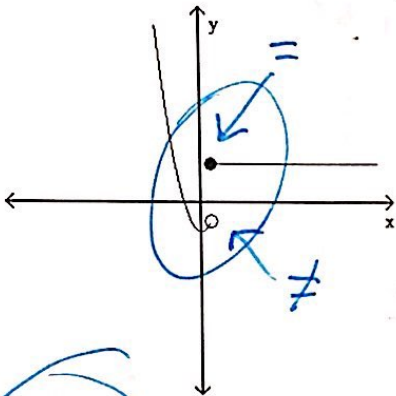
1 pt. 4)



A) Yes

B) No

1 pt. 5)



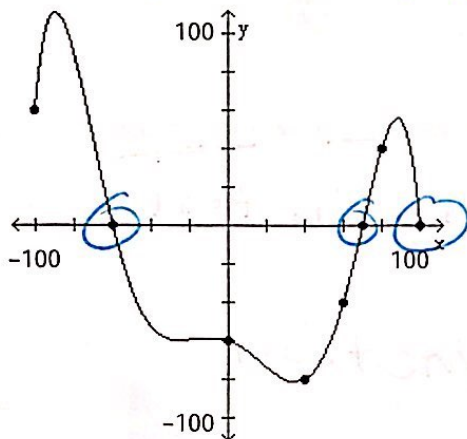
A) Yes

B) No

1 pt.

6) The graph of a function f is given. Use the graph to answer the question.
What are the x-intercepts?

write as a coordinate (x, y)



~~(-60, 0)~~

$(-60, 0)$

$(70, 0)$

$(100, 0)$

Match the graph to the function listed whose graph most resembles the one given.

7)

1 PL



A) square function

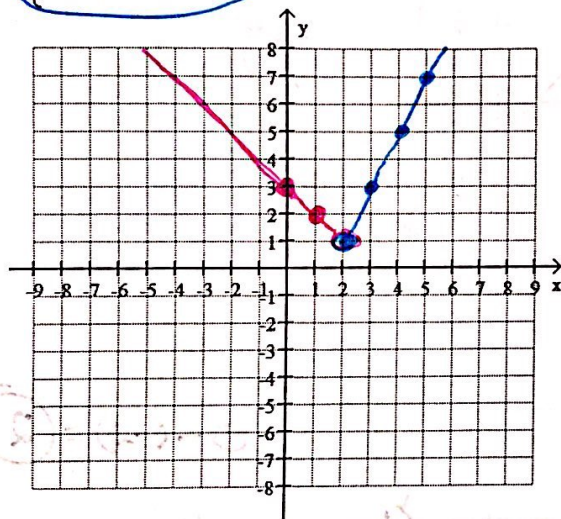
C) linear function

B) reciprocal function

D) absolute value function

8) Graph the function.

$$f(x) = \begin{cases} -x + 3 & \text{if } x < 2 \\ 2x - 3 & \text{if } x \geq 2 \end{cases}$$



open circle

x	y
2	1
1	2
0	3

closed circle

x	y
2	1
3	3
4	5

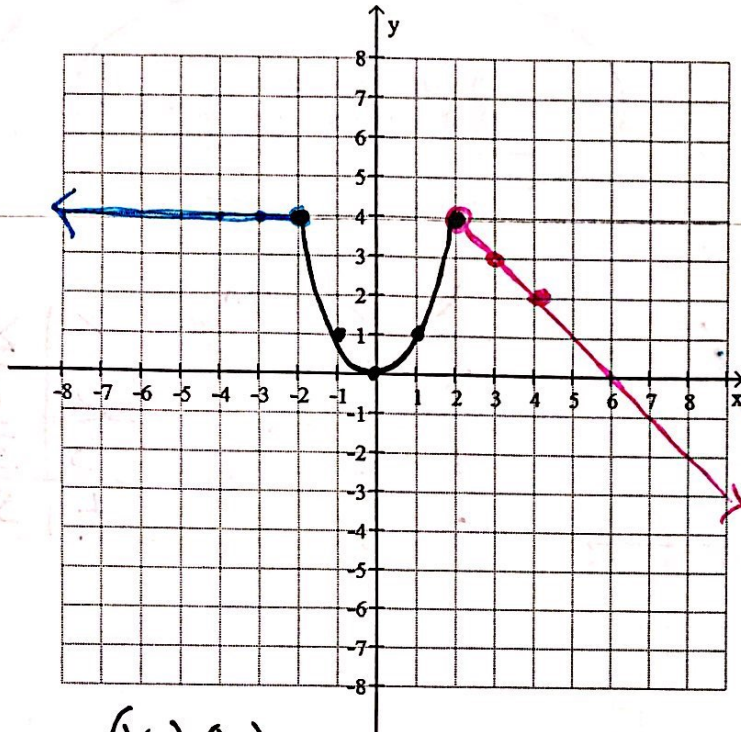
3 pts. 9) Graph the function. *open*

$$f(x) = \begin{cases} 4 & ; \text{if } x < -2 \\ x^2 & ; \text{if } -2 \leq x \leq 2 \\ -x+6 & ; \text{if } x > 2 \end{cases}$$

x	y
-2	4
-3	9
-4	16

x	y
-2	4
1	1
2	4

closed



x	y
2	4

open
use slope

$$0 - (-2) = 2$$

- 1 pt 10) Find the net change for the function between the given values.
 $f(x) = 2x - 4$; from 1 to 2
 $x_1 \quad x_2$

$$f(1) = 2(1) - 4 = -2$$

$$f(2) = 2(2) - 4 = 0$$

- 1 pt 11) Find the average rate of change for the function between the given values.
 $f(x) = x^2 + 3x$; from 1 to 6 *Slope.*

$$f(1) = 4$$

$$f(6) = (6)^2 + 3(6) = 54$$

$$\frac{54 - 4}{6 - 1} = \frac{50}{5} = 10$$

- 1 pt 12) Find the average rate of change for the function between the given values.
 $f(x) = \sqrt{2x}$; from 2 to 8

$$f(2) = \sqrt{2(2)} = \sqrt{4} = 2$$

$$f(8) = \sqrt{2(8)} = \sqrt{16} = 4$$

$$\frac{4 - 2}{8 - 2} = \frac{2}{6} = \frac{1}{3}$$

- 2 pts 13) Along with incomes, people's charitable contributions have steadily increased over the past few years. The table below shows the average deduction for charitable contributions reported on individual income tax returns for the period 1993 to 1998. Find the average rate of change between 1995 and 1997.

Year	Charitable Contributions
1993	\$1660
1994	\$2350
1995	\$2500
1996	\$2780
1997	\$3010
1998	\$3120

$$x_1 = 1995 \quad y_1 = 2500$$

$$x_2 = 1997 \quad y_2 = 3010$$

$$\frac{3010 - 2500}{1997 - 1995} = \frac{510}{2} = 255$$

$$x_1 \quad x_2 \quad x_2 - x_1 = 2$$

A) \$330 per year

B) \$510 per year

C) \$255 per year

D) \$310 per year