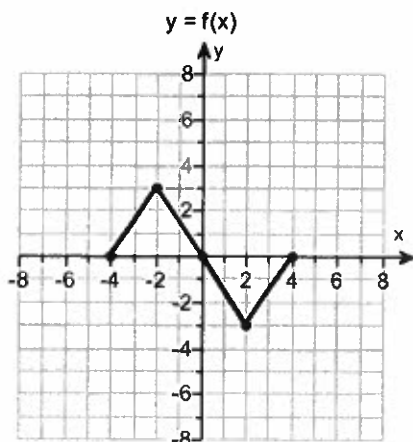


Student: _____
Date: _____

Instructor: Andreas Lazari
Course: Math1111-Summer2018

Assignment: Section 2.5 Homework

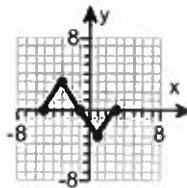
1. Use the graph of $y = f(x)$ to graph the function $g(x) = f(x) - 1$.



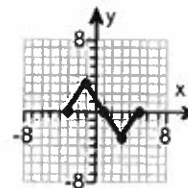
Shift
1 unit down.

Choose the correct graph of g below.

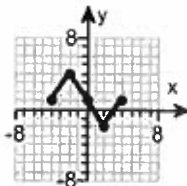
A.



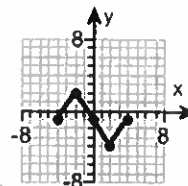
B.



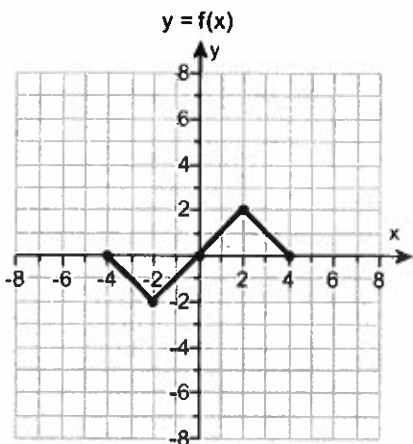
C.



D.



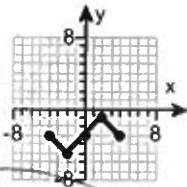
2. Use the graph of $y = f(x)$ to graph the function $g(x) = f(x + 3)$.



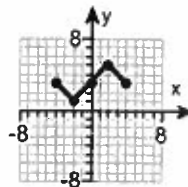
Shift
3 units left.

Choose the correct graph of g below.

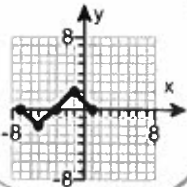
A.



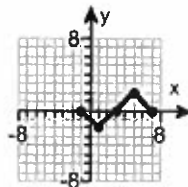
B.



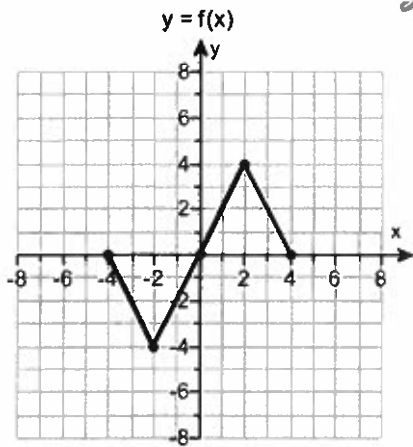
C.



D.



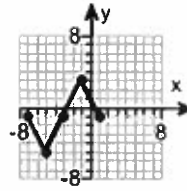
3. Use the graph of $y = f(x)$ to graph the function $g(x) = f(x - 3) + 1$.



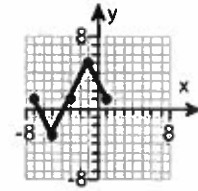
Shifts:
3 units right
and
1 unit up.

Choose the correct graph of g below.

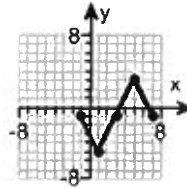
A.



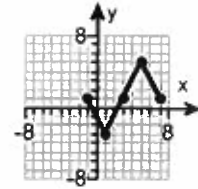
B.



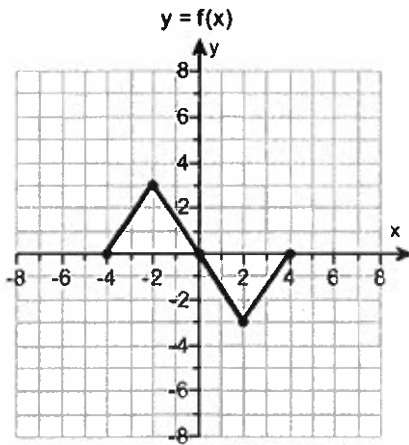
C.



D.



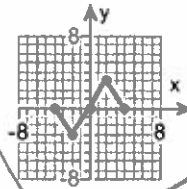
4. Use the graph of $y = f(x)$ to graph the function $g(x) = -f(x)$.



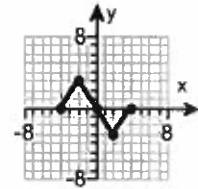
Shift:
Reflection
over the
X-axis.

Choose the correct graph of g below.

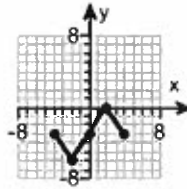
A.



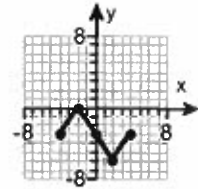
B.



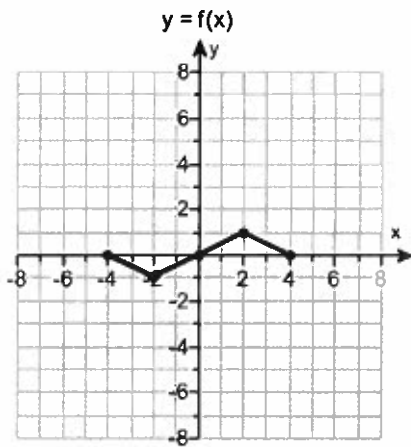
C.



D.



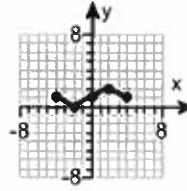
5. Use the graph of $y = f(x)$ to graph the function $g(x) = f(-x) + 1$.



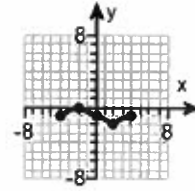
shift:
reflection over
the x-axis
and
shift one
unit up

Choose the correct graph of g below.

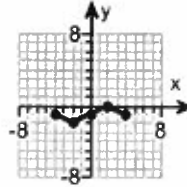
A.



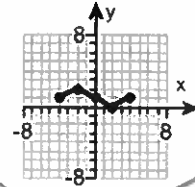
B.



C.

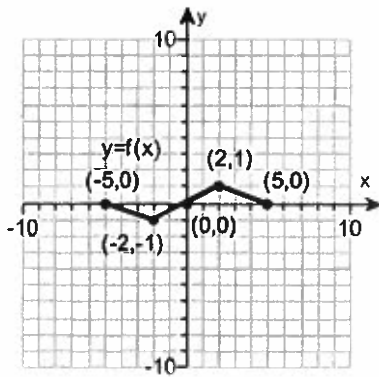


D.



6. Use the graph of $y = f(x)$ shown below to graph the function $g(x) = 3f(x)$.

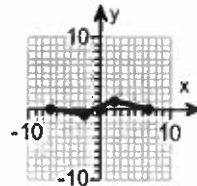
$$g(x) = 3f(x)$$



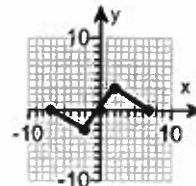
shift:
Multiplies
the y value
by 3 units.
It makes the
y values larger.

Choose the correct graph below.

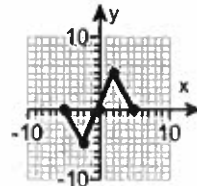
A.



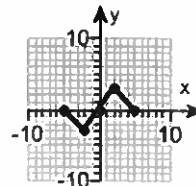
B.



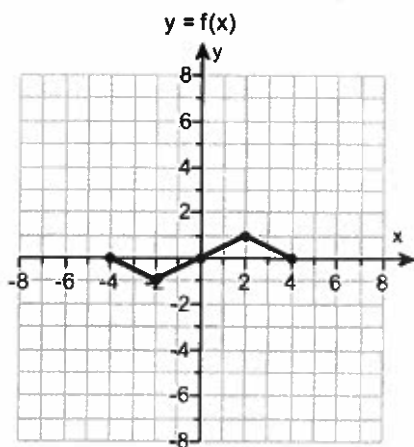
C.



D.



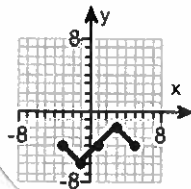
7. Use the graph of $y = f(x)$ to graph the function $g(x) = 2f(x - 1) - 4$.



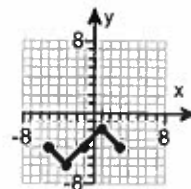
Shifts:
 1 unit right
 Multiplies the
 y value by 2.
 4 units down.

Choose the correct graph of g below.

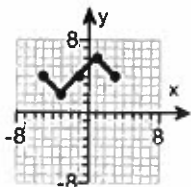
A.



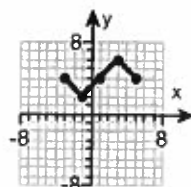
B.



C.



D.



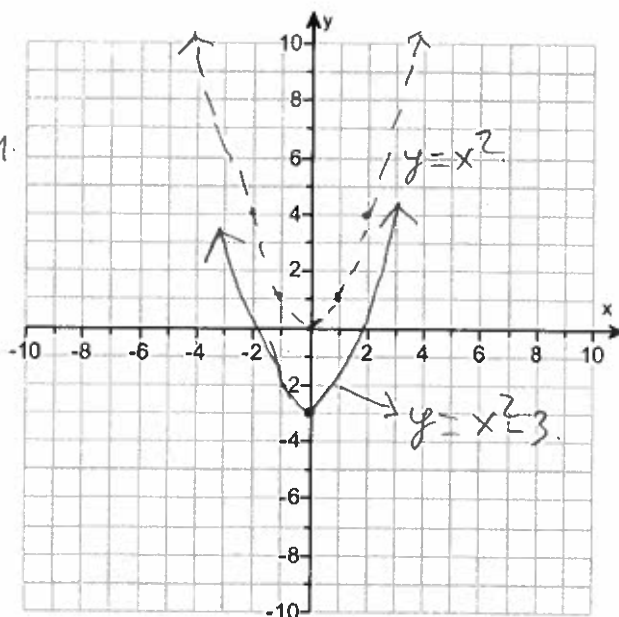
8. Use transformations of $f(x) = x^2$ to graph the following function.

$$g(x) = x^2 - 3$$

Shift
 3 units down.

Use the graphing tool to graph the function.

use TI 83/84



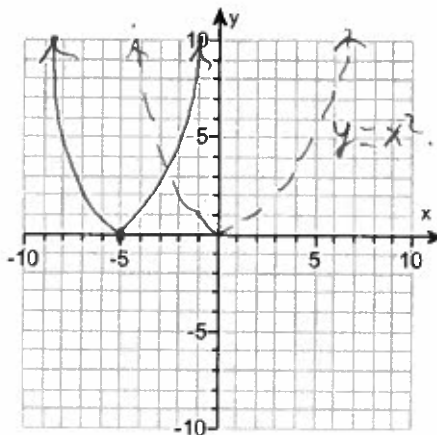
9. Use transformations of the graph of $f(x) = x^2$ to determine the graph of the given function.

$$g(x) = (x + 5)^2$$

Shift 5 units left.

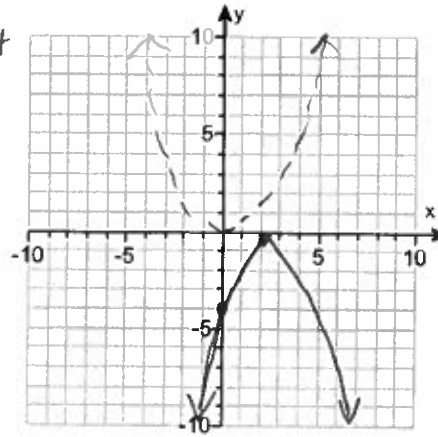
Use the graphing tool to graph the function.

use TI 83/84

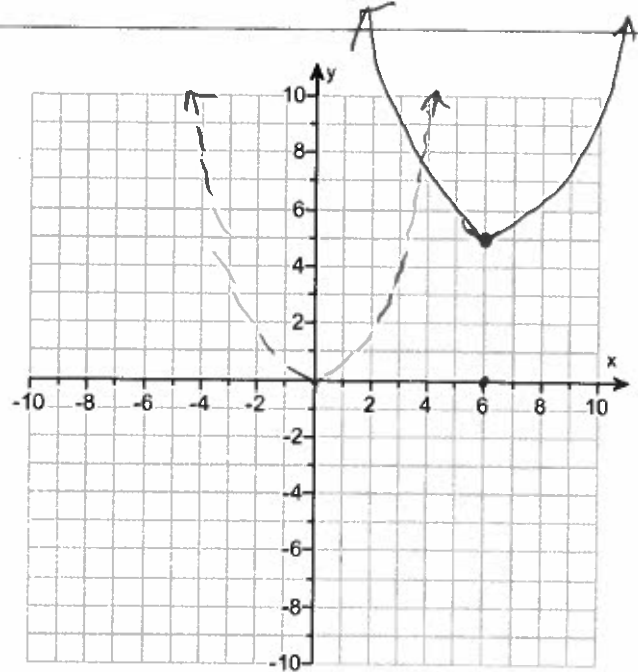


10. Use transformations of the graph of $f(x) = x^2$ to determine the graph of the given function.
 $h(x) = -(x - 2)^2$
- Shift 2 units right and reflection over the x-axis*
- Use the graphing tool to graph the function.

use TI 83/84



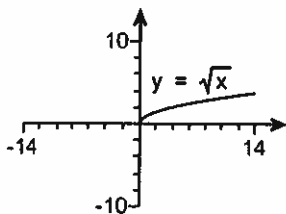
11. Use transformations of $f(x) = x^2$ to graph the following function.
 $g(x) = (x - 6)^2 + 5$
- Shift 6 units right and 5 units up*
- Use the graphing tool to graph the function.



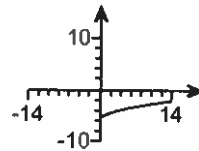
12. Graph the function using the techniques of shifting, compressing, stretching, and/or reflecting. Start with the graph of the basic function shown below.

$h(x) = \sqrt{x - 6}$

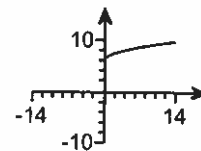
Shift 6 units right



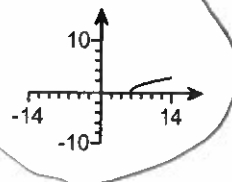
A.



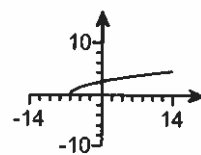
B.



C.



D.



13. Begin by graphing the square root function, $f(x) = \sqrt{x}$. Then use transformations of this graph to graph the given function.

$$g(x) = \frac{1}{4}\sqrt{x-3}$$

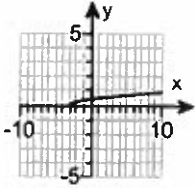
shift 3 units right

and

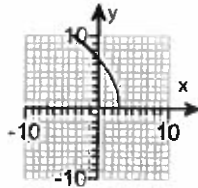
multiply y by $\frac{1}{4}$ (It makes the value of y smaller)

Choose the correct graph of $g(x)$ below.

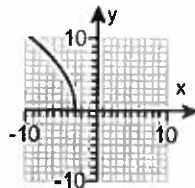
A.



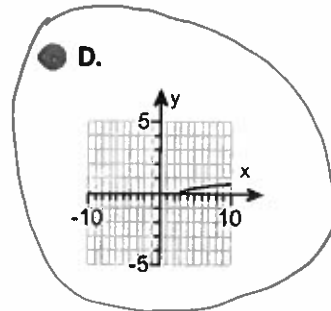
B.



C.



D.



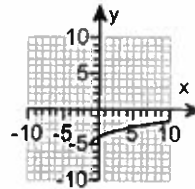
14. Use transformations of $f(x) = \sqrt{x}$ to graph the following function.

$$h(x) = \sqrt{x+5} + 1$$

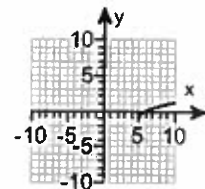
shift 5 units left
and 1 unit up.

Choose the correct graph below.

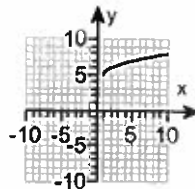
A.



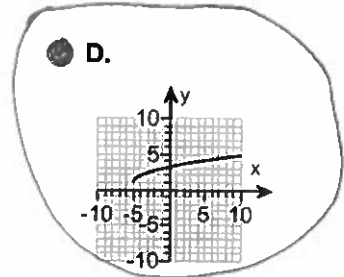
B.



C.



D.



15. Begin by graphing the absolute value function, $f(x) = |x|$. Then use transformations of this graph to graph the given function.

$$h(x) = |x| - 7$$

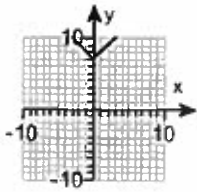
shift: 7 units down

What transformations are needed in order to obtain the graph of $h(x)$ from the graph of $f(x)$? Select all that apply.

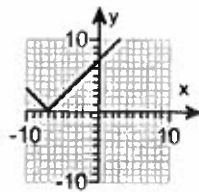
- A. Horizontal translation
- B. Vertical stretch/shrink
- C. Reflection about the y-axis
- D. Horizontal stretch/shrink
- E. Vertical translation
- F. Reflection about the x-axis

Choose the correct graph of $h(x) = |x| - 7$ below.

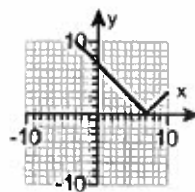
A.



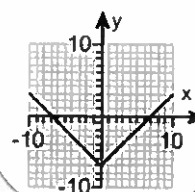
B.



C.



D.



16. Begin by graphing the absolute value function, $f(x) = |x|$. Then use transformations of this graph to graph the given function.

$$h(x) = |x - 3|$$

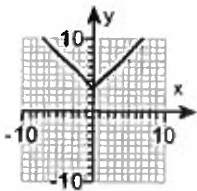
shift: 3 units right

What transformations are needed in order to obtain the graph of $h(x)$ from the graph of $f(x)$? Select all that apply.

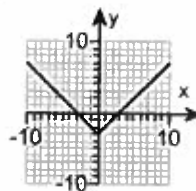
- A. Reflection about the y-axis
- B. Horizontal translation
- C. Vertical translation
- D. Vertical stretch/shrink
- E. Reflection about the x-axis
- F. Horizontal stretch/shrink

Choose the correct graph of $h(x) = |x - 3|$ below.

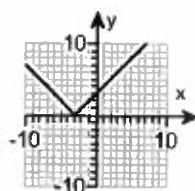
A.



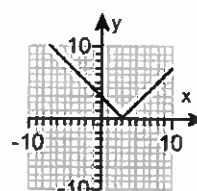
B.



C.



D.



17. Begin by graphing the absolute value function, $f(x) = |x|$. Then use transformations of this graph to graph the given function.

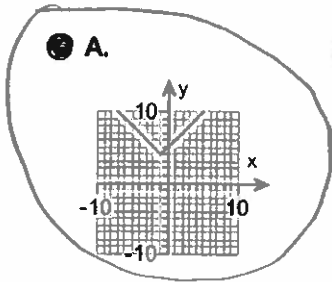
$$h(x) = |x + 1| + 4$$

*Shift: 1 unit left
and 4 units up.*

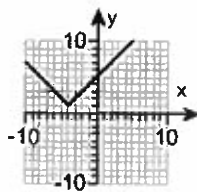
What transformations are needed in order to obtain the graph of $h(x)$ from the graph of $f(x)$? Select all that apply.

- A. Horizontal stretch/shrink
 B. Vertical translation
 C. Reflection about the x-axis
 D. Reflection about the y-axis
 E. Horizontal translation
 F. Vertical stretch/shrink

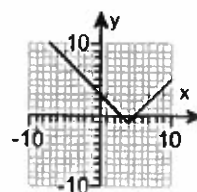
Choose the correct graph of $h(x)$ below.



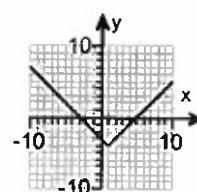
B.



C.



D.



18. Begin by graphing the absolute value function, $f(x) = |x|$. Then use transformations of this graph to graph the given function.

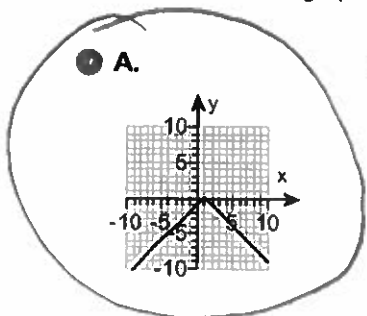
$$h(x) = -|x - 1|$$

*Shift 1 unit right
and reflection over the x-axis.*

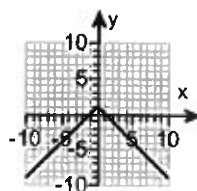
What transformations are needed in order to obtain the graph of $h(x)$ from the graph of $f(x)$? Select all that apply.

- A. Vertical stretch/shrink
 B. Vertical shift
 C. Reflection about the y-axis
 D. Reflection about the x-axis
 E. Horizontal stretch/shrink
 F. Horizontal shift

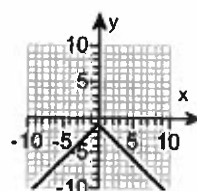
Choose the correct graph below.



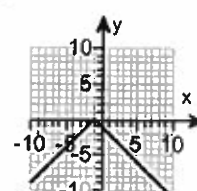
B.



C.



D.



19. Begin by graphing the absolute value function, $f(x) = |x|$. Then use transformations of this graph to graph the given function.

$$g(x) = -|x - 1| - 2$$

*Shift: 1 unit to the right
2 units down.*

What transformations are needed in order to obtain the graph of $g(x)$ from the graph of $f(x)$? Select all that apply.
and reflection over the x-axis.

A. Reflection about the x-axis

B. Horizontal translation

C. Vertical stretch/shrink

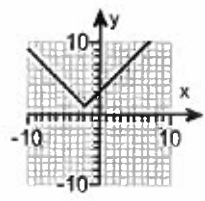
D. Reflection about the y-axis

E. Vertical translation

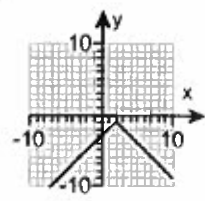
F. Horizontal stretch/shrink

Choose the correct graph of $g(x)$ below.

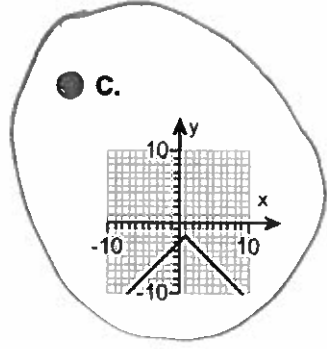
A.



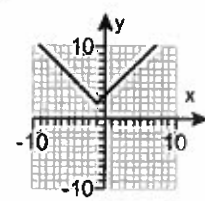
B.



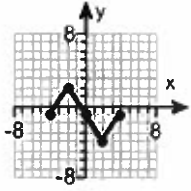
C.



D.

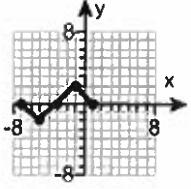


1.



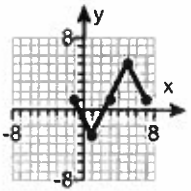
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2.



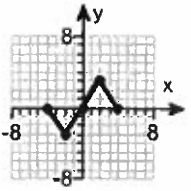
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3.



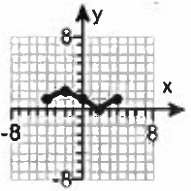
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4.



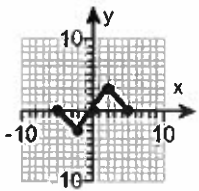
A.

5.



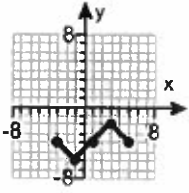
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6.



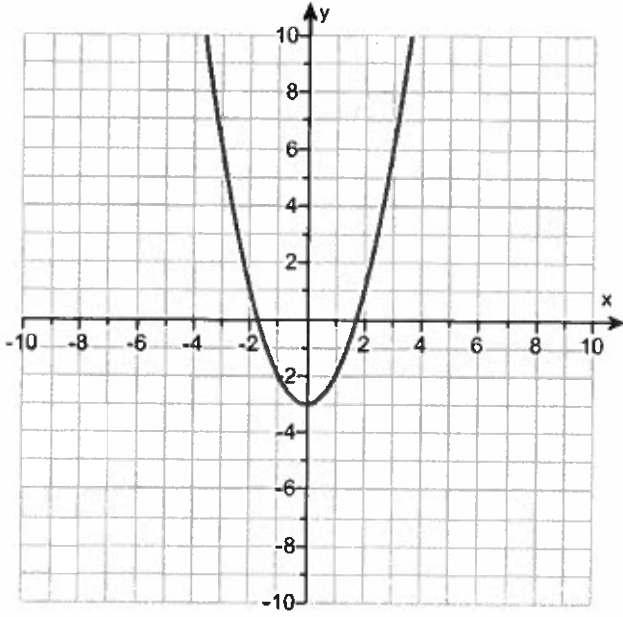
D.

7.

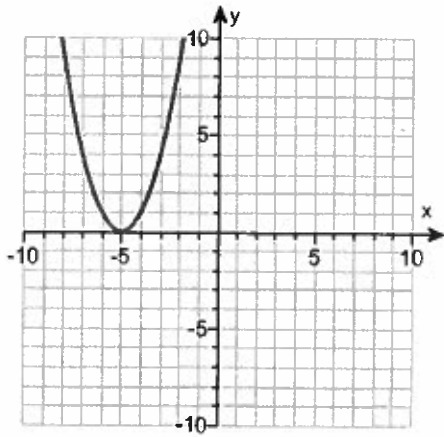


A.

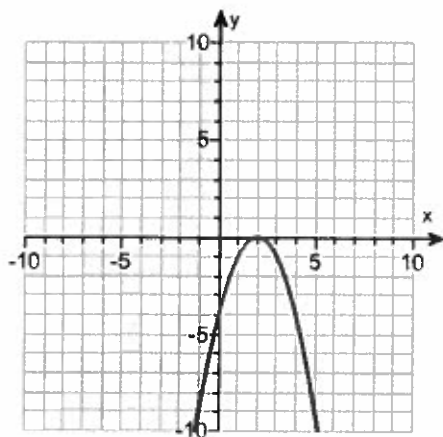
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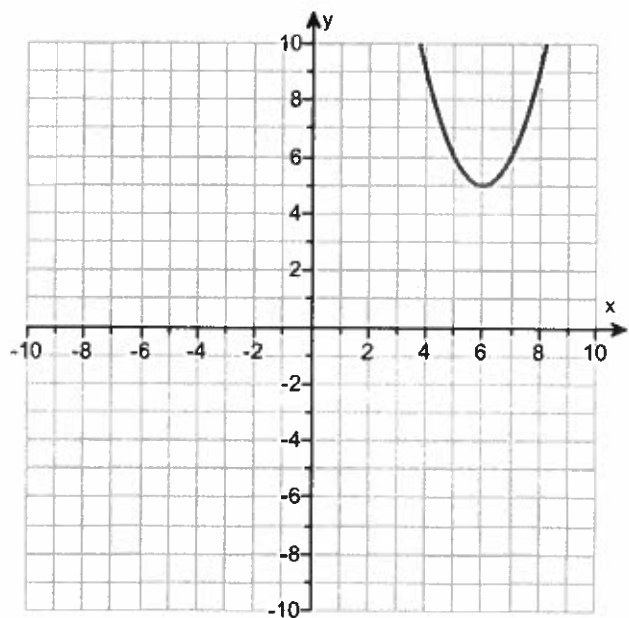
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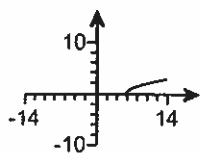
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11.

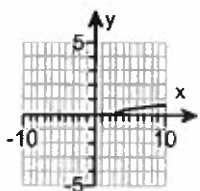


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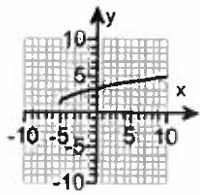
C.

13.



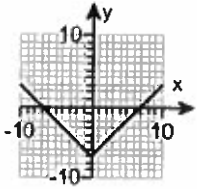
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14.



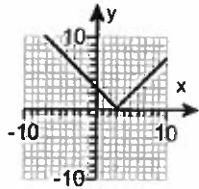
D.

15. E. Vertical translation



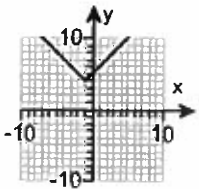
D.

16. B. Horizontal translation



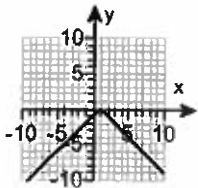
D.

17. B. Vertical translation, E. Horizontal translation



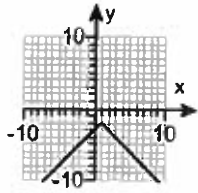
A.

18. D. Reflection about the x-axis, F. Horizontal shift



A.

19. A. Reflection about the x-axis, B. Horizontal translation, E. Vertical translation



C.
