1.

The table below shows the relationship between x and y.

x	y
-1	-1
0	1
1	3
2	17

Which function best represents the relationship between the quantities in the table?

F $y = 2x + 1$

G $y = 2x^3 + 1$

H $y = 2x^2 - 3$

J $y = 2x^2 + 4x + 1$

2.

Which of the following equations best represents the relationship in the set of data shown below?

x	-4	-3	-1	2	4
y	24	17	9	12	24

A $y = -7x - 4$

B $y = \frac{3}{2}x^2$

C $y = -5x + 4$

D $y = x^2 + 8$

3.

How would the graph of the function $y = x^2 + 4$ be affected if the function were changed to $y = x^2 + 1$?

F The graph would shift 3 units up.

G The graph would shift 3 units down.

H The graph would shift 3 units to the right.

J The graph would shift 3 units to the left.

4.

What is the effect on the graph of the equation $y = -4x^2$ when the equation is changed to $y = 4x^2$?

A The graph of $y = 4x^2$ is translated 8 units down.

B The graph of $y = 4x^2$ is a reflection of $y = -4x^2$ across the x-axis.

C The graph of $y = 4x^2$ is translated 8 units up.

D The graph of $y = 4x^2$ is a reflection of $y = -4x^2$ across the y-axis.

Okay, you get this problem on the TAKS. How can you prove the answer you pick is correct? Explain in real words.

_____
_____
_____

5.

How does the graph of $y = x^2$ differ from the graph of $y = x^2 - 4$?

A The graph of $y = x^2 - 4$ is wider than the graph of $y = x^2$.

B The graph of $y = x^2 - 4$ is shifted to the left of the graph of $y = x^2$.

C The graph of $y = x^2 - 4$ is shifted down from the graph of $y = x^2$.

D The graph of $y = x^2 - 4$ is narrower than the graph of $y = x^2$.

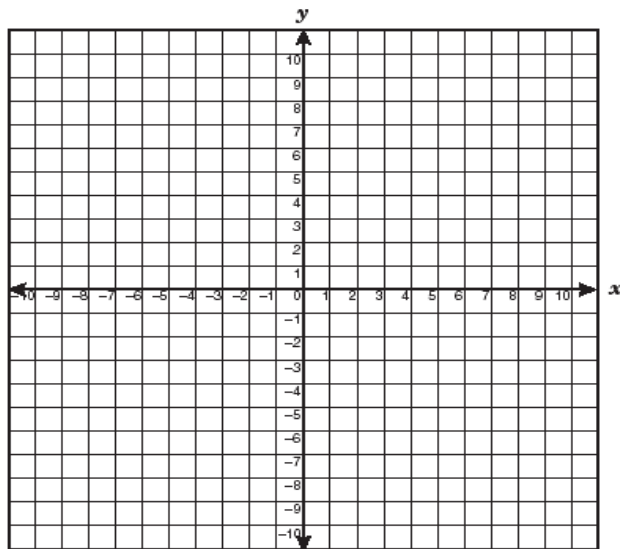**6.**

In the graph of the function $y = x^2 + 5$, which describes the shift in the vertex of the parabola if, in the function, 5 is changed to -2?

A 3 units up

B 7 units up
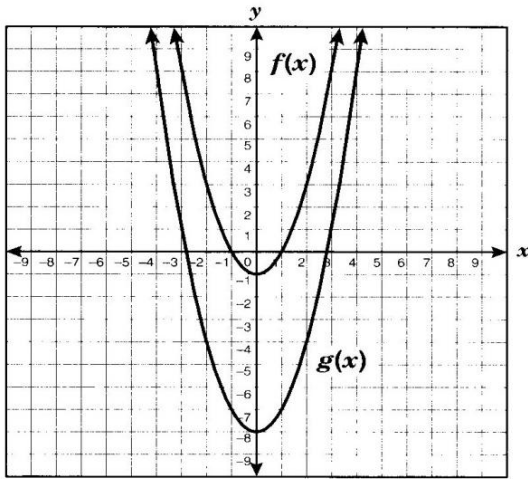
C 3 units down

D 7 units down

7.

When graphed, which function would appear to be shifted 2 units up from the graph of $f(x) = x^2 + 1$?

F $g(x) = x^2 - 1$

G $g(x) = x^2 + 3$

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

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

8.

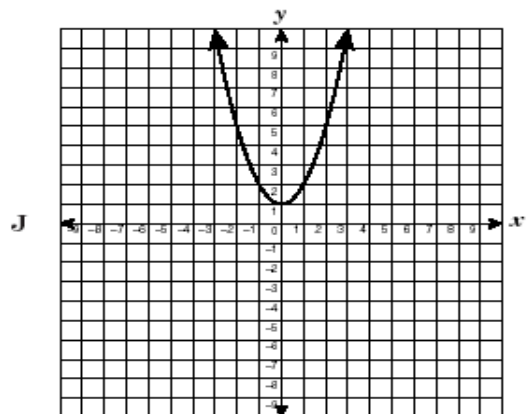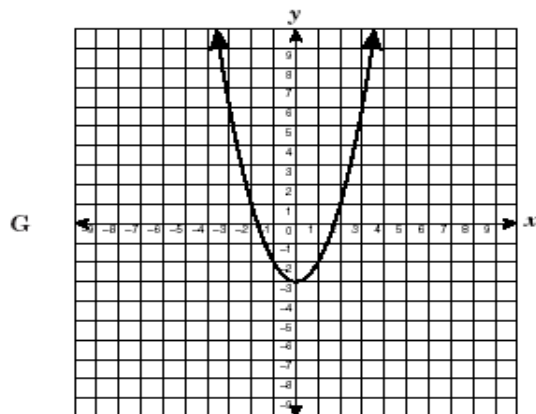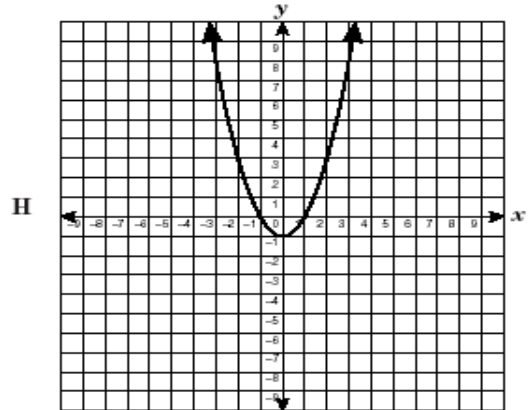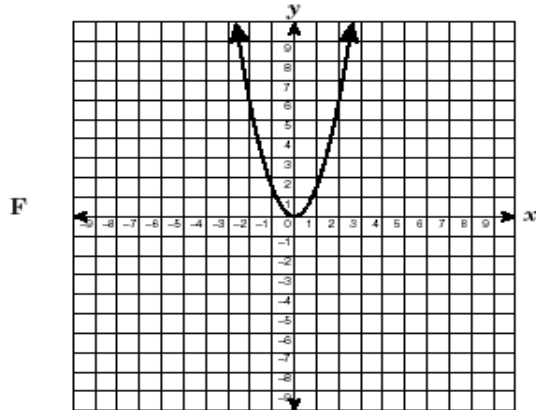The graphs of $f(x)$ and $g(x)$ are shown on the grid below.

If $f(x) = x^2 - 1$, what is the equation of $g(x)$?

A $g(x) = x^2 + 8$

B $g(x) = x^2 - 8$
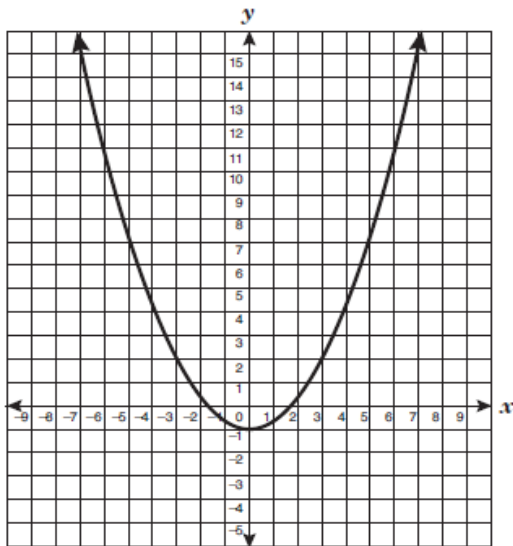
C $g(x) = 8x^2 - 1$

D $g(x) = -8x^2 - 1$

9.

Which graph shows a function $y = x^2 + c$ when $c < -1$?

F

H

G

J

10.

7 The graph of a function of the form $y = ax^2 + c$ is shown below.

If the graph is translated only up or down to include the ordered pair (6, 7), which of the following equations best represents the resulting graph?

A $\quad y = -\dfrac{1}{3}x^2 + 3$

B $\quad y = \dfrac{1}{3}x^2 + 1$

C $\quad y = -\dfrac{1}{3}x^2 - 10$

D $\quad y = \dfrac{1}{3}x^2 - 5$

First of all, what two answers cannot be correct as the question merely translates the graph and does not "reflect" it?
_____ and _____

What is the value of "c" on the given graph? (C is the vertex.)

Mark the point (6,7) on the graph

Is the new graph going to be moved up or down from the given graph?_____.

That should eliminate two answers. If you said "up", then C and D are eliminated but if you said down, A and b are eliminated.

Explain why:

_____
_____

Now, count the number of units that (6.7) is away from the given graph VERTICALLY. _____

So, the graph new graph is moved _____units _____ (up or down)

Add or subtract this from the "c" value on the graph._____. Answer?_____

11.

How does the graph of $f(x) = x^2 - 7$ compare to the graph of $g(x) = x^2 + 5$?

A The vertex of $f(x)$ is 12 units lower.

B The vertex of $f(x)$ is 12 units higher.
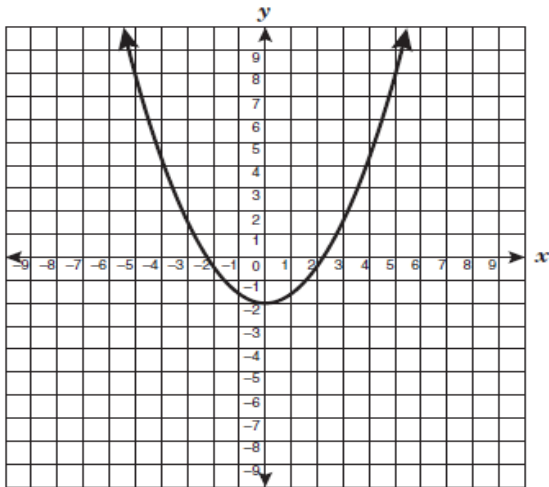
C The vertex of $f(x)$ is 2 units to the left.

D The vertex of $f(x)$ is 2 units to the right.

What does changing the **"c"** value do to a quadratic?

Translates it up/ down/ left/ right

12.

1 The graph of the equation $y = 0.4x^2 - 2$ is shown below.

If the graph is translated 3 units up, what will be the equation of the resulting graph?

Translating changes the A value or the C value????? _____

So, change it and write the equation you get:

_____

13.

Which equation is the parent function of a quadratic equation?

A $y = \sqrt{x}$

B $y = x$

C $y = |x|$

D $y = x^2$

This TAKS question does not to compare to a graph that you can generate on the calculator. This is a vocabulary question.
SO, answer the following too:

What is the parent function of an absolute value equation?
A   B   C   D

What is the parent function of a Linear equation?
A   B   C   D

What is the the parent function of an square root equation?
A   B   C   D