Unit 7 STAAR Review

	Question	TEKS	Exam/ Question#	Unit
1	Given $g(x) = x^2 - 6x - 16$, which statement is true? **A** The zeros are $x = -8$ and $x = 2$ because the factors of g are $(x + 8)$ and $(x - 2)$. **B** The zeros are $x = -8$ and $x = -2$ because the factors of g are $(x + 8)$ and $(x + 2)$. **C** The zeros are $x = -2$ and $x = 8$ because the factors of g are $(x + 2)$ and $(x - 8)$. [correct answer] **D** The zeros are $x = 2$ and $x = 8$ because the factors of g are $(x - 2)$ and $(x - 8)$.	A.7(B)	2021/ Question#4	7

<table>
<tr><th></th><th>Question</th><th>TEKS</th><th>Exam/ Question#</th><th>Unit</th></tr>
<tr><td>2</td><td>A ball is placed in a machine that throws the ball up in the air. The table represents some points on the graph of a function that models the ball's distance from the ground with respect to the time since the ball has been thrown.

<table>
<tr><td>Time Since Thrown from Machine (seconds)</td><td>0</td><td>0.25</td><td>0.50</td><td>0.75</td><td>1.00</td><td>1.25</td><td>1.50</td><td>1.75</td></tr>
<tr><td>Distance from Ground (meters)</td><td>0</td><td>2.76</td><td>4.90</td><td>6.43</td><td>7.35</td><td>7.66</td><td>7.35</td><td>6.43</td></tr>
</table>
What is the range for this situation?

A All real numbers less than or equal to 1.25

B All real numbers less than or equal to 7.66

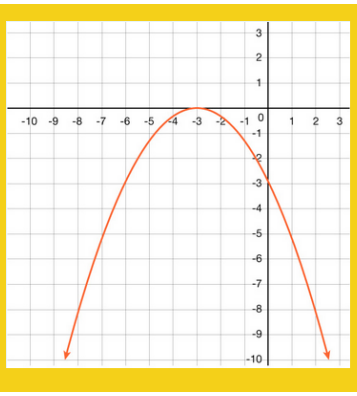
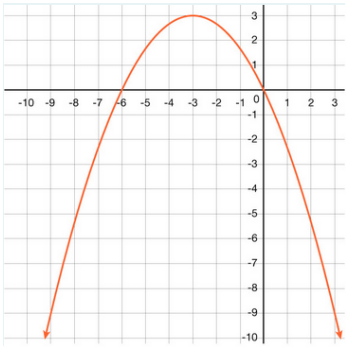
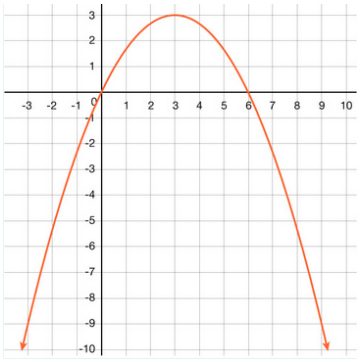
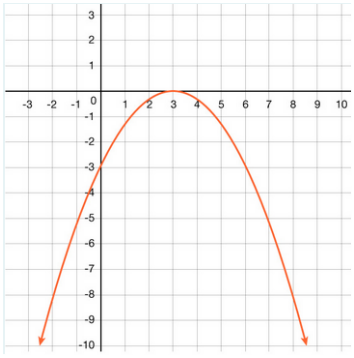
C All real numbers greater than or equal to 0 and less than or equal to 1.25

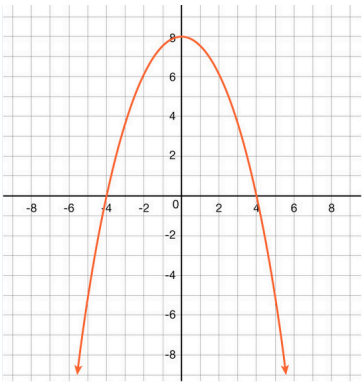
D All real numbers greater than or equal to 0 and less than or equal to 7.66 [correct answer]</td><td>A.6(A)</td><td>2021/ Question#12</td><td>7</td></tr>
<tr><td>3</td><td>Two characteristics of quadratic function p are given.

• The axis of symmetry of the graph of p is $x = -3$.

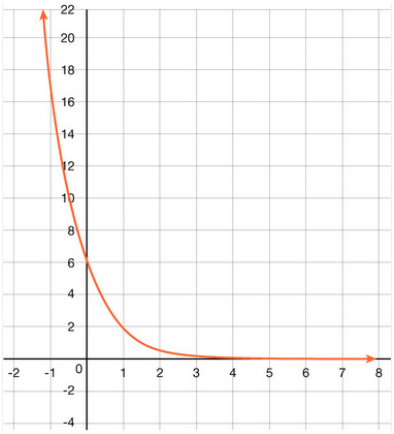
• Function p has exactly one zero.

Based on this information, which graph could represent p?</td><td>A.7(A</td><td>2021/ Question#7</td><td>7</td></tr>
</table>

	Question	TEKS	Exam/ Question#	Unit
	A  [correct answer] **B**  **C**  **D** 			

	Question	TEKS	Exam/ Question#	Unit
4	The graph of $f(x) = x^2$ was translated 4.5 units to the left to create the graph of function g. Which function represents g? **A** $g(x) = (x - 4.5)^2$ **B** $g(x) = (x + 4.5)^2$ [correct answer] **C** $g(x) = (x + 4.5)^2$ **D** $g(x) = x^2 + 4.5$	A.7(C)	2021/ Question#52	7
5	The graph of a quadratic function is shown on the grid.  Which function is best represented by this graph? **A** $f(x) = -\frac{1}{2}x^2 + 16$ **B** $f(x) = -x^2 + 16$ **C** $f(x) = -x^2 + 8$ **D** $f(x) = -\frac{1}{2}x^2 + 8$ [correct answer]	A.6(C)	2021/ Question#16	7

	Question	TEKS	Exam/ Question#	Unit
6	Which expression is equivalent to $\frac{36x^4y^5}{(3xy)^2}$ for all values of x and y where the expression is defined? **A** $12x^3y^4$ **B** $27x^2y^3$ **C** $4x^2y^3$ [correct answer] **D** $6x^3y^4$	A.11(B)	2021/ Question#26	6
7	Which expression is equivalent to $16w^2 + 24w + 9$? **A** $(4w + 3)^2$ [correct answer] **B** $(4w - 3)^2$ **C** $(8w + 3)^2$ **D** $(8w - 3)^2$	A.10(E)	2021/ Question#32	6

	Question	TEKS	Exam/ Question#	Unit
8	An exponential function is graphed on the grid.  Which function is best represented by the graph? **A** $g(x) = 6(\frac{1}{3})^x$ [correct answer] **B** $g(x) = 6(3)^x$ **C** $g(x) = 6 - (\frac{1}{3})^x$ **D** $g(x) = 6 - (3)^x$	A.3(B) A.9(C)	2019/ Question#9	5

	Question	TEKS	Exam/ Question#	Unit
9	Which table shows y as a function of x? **A** **B** **C** [correct answer] **D**	A.12(A)	2019/ Question#44	4

A

x	-13	-13	-13	-13
y	-2	0	5	7

B

x	-6	-1	-1	10
y	3	-1	5	-9

C

x	1	3	7	12
y	4	4	4	4

[correct answer]

D

x	-9	-2	0	0
y	-7	-5	0	6

	Question	TEKS	Exam/ Question#	Unit
10	A college student completed some courses worth 3 credits and some courses worth 4 credits. The student earned a total of 59 credits after completing 18 courses. How many courses worth 3 credits did the student complete? **A** 5 **B** 13 [correct answer] **C** 20 **D** 39	A.6(A)	2019/ Question#25	2