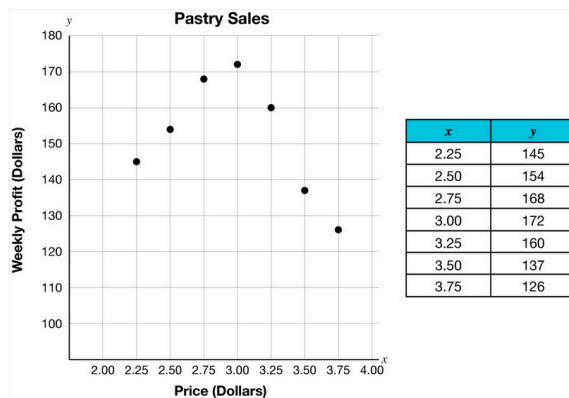
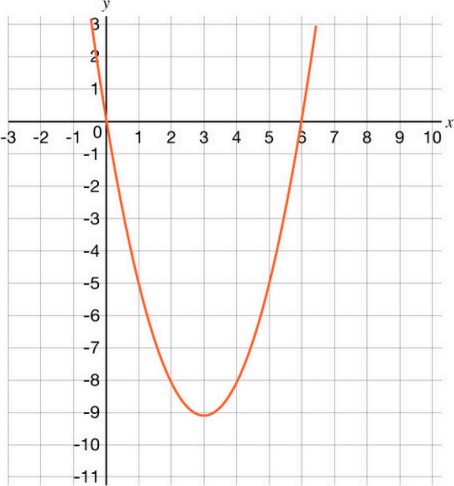


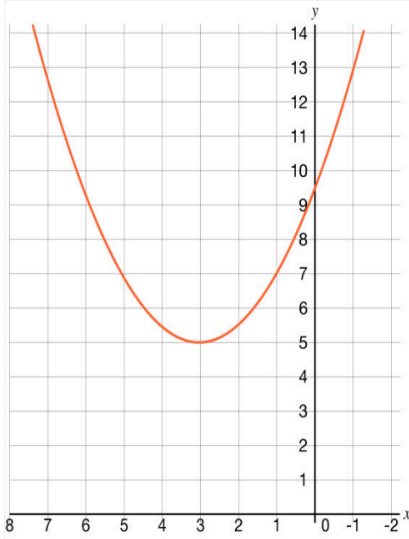
Unit 8 STAAR Review

	Question	TEKS	Exam/ Question#	Unit
1	Which value of x is a solution to this equation? $3x^2 - 30x - 72 = 0$ A $x = -12$ B $x = -4$ C $x = -2$ [correct answer] D $x = -6$	A.8(A)	2021/ Question#23	8
2	What is the solution set for $2x^2 + 15 = -11x$? A $\{-5, -1.5\}$ B $\{2.5, 3\}$ C $\{1.5, 5\}$ D $\{-3, -2.5\}$ [correct answer]	A.8(A)	2021/ Question#37	8

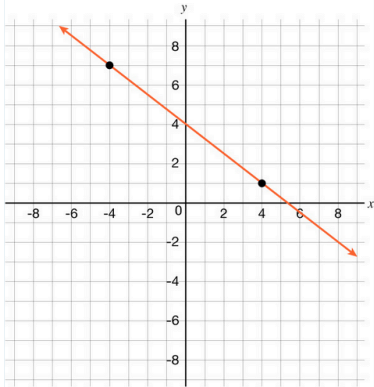
Question	TEKS	Exam/ Question#	Unit																
<p>3 The scatterplot and table show the weekly profit in dollars earned from the sale of pastries at seven different prices. The data can be modeled by a quadratic function.</p> <div><table><thead><tr><th>x</th><th>y</th></tr></thead><tbody><tr><td>2.25</td><td>145</td></tr><tr><td>2.50</td><td>154</td></tr><tr><td>2.75</td><td>168</td></tr><tr><td>3.00</td><td>172</td></tr><tr><td>3.25</td><td>160</td></tr><tr><td>3.50</td><td>137</td></tr><tr><td>3.75</td><td>126</td></tr></tbody></table></div> <p>Which function best models the data?</p> <p>A $y = 0.001x^2 - 0.426x + 35.672$</p> <p>B $y = -60.4x^2 + 348.1x - 334.2$ [correct answer]</p> <p>C $y = 0.001x^2 + 35.672$</p> <p>D $y = -60.4x^2 - 334.2$</p>	x	y	2.25	145	2.50	154	2.75	168	3.00	172	3.25	160	3.50	137	3.75	126	A.8(B)	2021/ Question#47	8
x	y																		
2.25	145																		
2.50	154																		
2.75	168																		
3.00	172																		
3.25	160																		
3.50	137																		
3.75	126																		

Question	TEKS	Exam/ Question#	Unit																		
<div>4</div> <div>A company collected data for the number of text messages sent and received using a text-message application since October 2011. The table shows the number of text messages sent and received in billions over time. The data can be modeled by a quadratic function.</div> <div><table><thead><tr><th>Number of Months since October 2011 t</th><th>Number of Text Messages, $n(t)$ (billions)</th></tr></thead><tbody><tr><td>5</td><td>3</td></tr><tr><td>10</td><td>10</td></tr><tr><td>15</td><td>17</td></tr><tr><td>20</td><td>27</td></tr><tr><td>25</td><td>44</td></tr><tr><td>30</td><td>64</td></tr><tr><td>35</td><td>84</td></tr><tr><td>40</td><td>112</td></tr></tbody></table></div> <div>Which function best models the data?</div> <div><div>A $n(t) = -0.002t^2 + 0.55t + 5.02$</div><div>B $n(t) = 0.072t^2 - 0.15t + 2.73$ [correct answer]</div><div>C $n(t) = -0.002t^2 + 5.02$</div><div>D $n(t) = 0.072t^2 + 2.73$</div></div>	Number of Months since October 2011 t	Number of Text Messages, $n(t)$ (billions)	5	3	10	10	15	17	20	27	25	44	30	64	35	84	40	112	A.8(B)	2019/ Question#19	8
Number of Months since October 2011 t	Number of Text Messages, $n(t)$ (billions)																				
5	3																				
10	10																				
15	17																				
20	27																				
25	44																				
30	64																				
35	84																				
40	112																				

	Question	TEKS	Exam/ Question#	Unit
5	<p>The graph of a quadratic function is shown on the grid.</p>  <p>Which function is best represented by this graph?</p> <p>A $h(x) = x^2 - 3x - 9$</p> <p>B $h(x) = x^2 + 3x - 9$</p> <p>C $h(x) = x^2 - 6x$ [correct answer]</p> <p>D $h(x) = x^2 + 6x$</p>	A.6(C)	2019/ Question#28	8

	Question	TEKS	Exam/ Question#	Unit
6	<p>A quadratic function is graphed on the grid.</p>  <p>Which answer choice best represents the domain and range of the function?</p> <p>A Domain: $x \geq -3$ Range: $y \geq 5$</p> <p>B Domain: All real numbers [correct answer] Range: $y \geq 5$</p> <p>C Domain: $x \geq -3$ Range: All real numbers</p> <p>D Domain: $y \geq 5$ Range: $x \geq -3$</p>	A.6(A)	2021/ Question#43	7

Question	TEKS	Exam/ Question#	Unit												
7 Which expression is equivalent to $x^2 + 10x + 24$? A $(x + 1)(x + 24)$ B $(x + 2)(x + 12)$ C $(x + 3)(x + 8)$ D $(x + 4)(x + 6)$ [correct answer]	A.10(E)	2021/ Question#45	7												
8 The table represents some points on the graph of an exponential function. <table><tr><th>x</th><th>y</th></tr><tr><td>-2</td><td>12.5</td></tr><tr><td>-1</td><td>15</td></tr><tr><td>0</td><td>18</td></tr><tr><td>1</td><td>21.6</td></tr><tr><td>2</td><td>25.92</td></tr></table> Which function represents the same relationship? A $f(x) = 15(\frac{5}{6})^x$ B $f(x) = 18(\frac{6}{5})^x$ [correct answer] C $f(x) = 15(\frac{6}{5})^x$ D $f(x) = 18(\frac{5}{6})^x$	x	y	-2	12.5	-1	15	0	18	1	21.6	2	25.92	A.9(C)	2019/ Question#31	5
x	y														
-2	12.5														
-1	15														
0	18														
1	21.6														
2	25.92														

	Question	TEKS	Exam/ Question#	Unit
9	<p>The graph of a linear function is shown on the grid.</p>  <p>What is the rate of change of y with respect to x for this function?</p> <p>A $\frac{7}{9}$</p> <p>B $-\frac{7}{9}$</p> <p>C $\frac{3}{4}$</p> <p>D $-\frac{3}{4}$ [correct answer]</p>	A.3(B)	2021/ Question#25	4

	Question	TEKS	Exam/ Question#	Unit
10	<p>A customer at a store paid \$64 for three large candles and four small candles. At the same store, a second customer paid \$4 more than the first customer for one large candle and eight small candles.</p> <p>The price of each large candle is the same, and the price of each small candle is the same.</p> <p>Which system of equations can be used to find the price in dollars of each large candle, x, and each small candle, y?</p> <p>A $4y = 3x + 64$</p> <p>$8y = x + 68$</p> <p>B $4y = 3x + 64$</p> <p>$8y = x + 60$</p> <p>C $3x + 4y = 64$ [correct answer]</p> <p>$x + 8y = 68$</p> <p>D $3x + 4y = 64$</p> <p>$x + 8y = 60$</p>	A.2(I)	2019/ Question#51	2