Unit 3 STAAR Review

	Question	TEKS	Exam/ Question#	Unit
1	The table shows the lengths and widths of several rectangles. **Height (in.)**: 70, 21, 34, 10, 92, 54, 24, 35, 42, 66 **Length (in.))**: 25, 32, 12, 16, 45, 40, 23, 35, 21, 14 What does the correlation coefficient for the data indicate about the strength of the linear association between the height and the length of these rectangles? **A** Weak negative correlation **B** Strong negative correlation **C** Weak positive correlation [correct answer] **D** Strong positive correlation	A.4(A)	2017/ Question#19	3

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<table>
<tr><th></th><th>Question</th><th>TEKS</th><th>Exam/ Question#</th><th>Unit</th></tr>
<tr><td>2</td><td>A company advertises on a website. A worker tracked the number of visits to the website and the number of clicks on the advertisement. The table shows the data for several days. A linear function can be used to model the data.
<table><tr><th>Number of Visits to Website, x</th><th>Number of Clicks on Advertisement, y</th></tr><tr><td>153</td><td>14</td></tr><tr><td>629</td><td>38</td></tr><tr><td>471</td><td>30</td></tr><tr><td>914</td><td>53</td></tr><tr><td>307</td><td>21</td></tr><tr><td>1045</td><td>60</td></tr><tr><td>510</td><td>32</td></tr><tr><td>1106</td><td>63</td></tr></table>Based on the table, what is the best prediction of the number of clicks on the advertisement if 1,500 people visit the website?

A 77
B 137
C 83 [correct answer]
D 105</td><td>A.4(C)</td><td>2019/ Question#22</td><td>3</td></tr>
</table>

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	Question	TEKS	Exam/ Question#	Unit
3	Which situation best shows causation? **A** The length of a rectangle affects the width of the rectangle. **B** The amount of time a cell phone is used affects the charge of its battery. [correct answer] **C** The number of ice-cream bars sold affects the number of milkshakes sold **D** The number of soccer balls a team owns affects the number of games the team wins during the soccer season.	A.4(B)	2021/ Question#31	3

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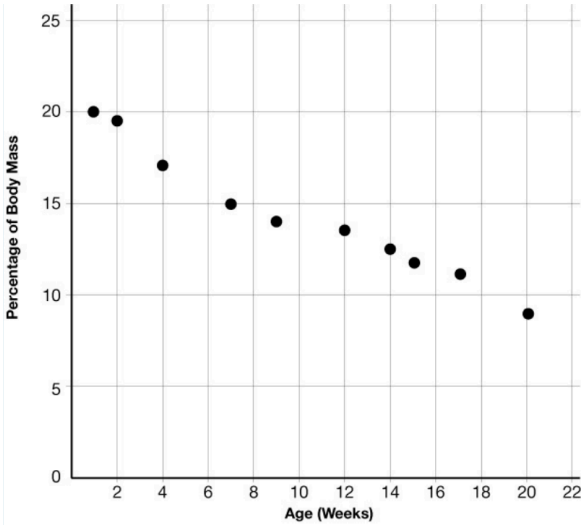
	Question	TEKS	Exam/ Question#	Unit
4	A zookeeper recorded the feeding schedule for a baby rhinoceros for 20 weeks. The table and scatterplot show the percentage of the baby rhinoceros's body mass that was used to determine the amount of food given at each feeding as a linear function of its age in weeks.  **Age (weeks)**: 1, 2, 4, 7, 9, 12, 14, 15, 17, 20 **Percentage of Body Mass**: 20, 19.5, 17, 15, 14, 13.5, 12.4, 11.6, 11, 9 What is the best prediction of the percentage of the baby rhinoceros's body mass that should be used to determine the amount of food given at each feeding when it is 25 weeks old? **A** 8.5% **B** 6% [correct answer] **C** 2.5% **D** 10%	A.4(C)	2018/ Question#12	3

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	Question	TEKS	Exam/ Question#	Unit
5	Which situation does NOT show causation? **A** When the student population at a school increases, the number of teachers at the school increases. **B** When the amount of sugar in a quart of apple juice is reduced, there are fewer calories in each serving. **C** When there are more workers on a project, the project is completed in less time. **D** When there is more protein in an athlete's diet, the athlete scores more points in a game. [correct answer]	A.4(B)	2018/ Question#25	3
6	What is the solution set for $-\ 4x\ +\ 10 \geq 5x\ +\ 55$? **A** $x \geq 5$ **B** $x \geq 45$ **C** $x \leq -\ 5$ [correct answer] **D** $x \leq -\ 45$	A.5(B)	2018/ Question#30	2

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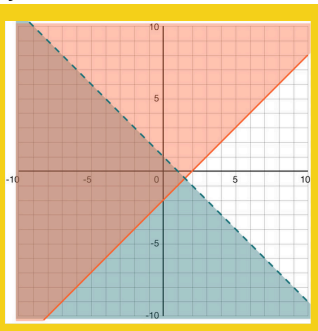
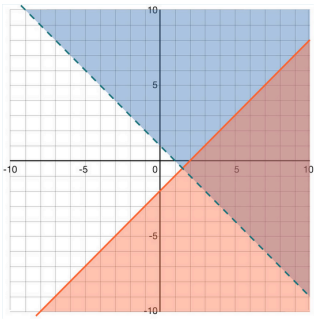
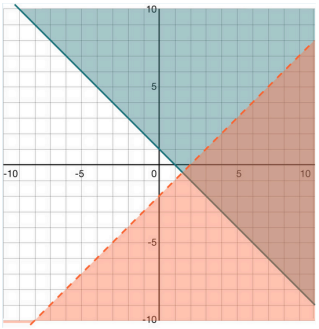
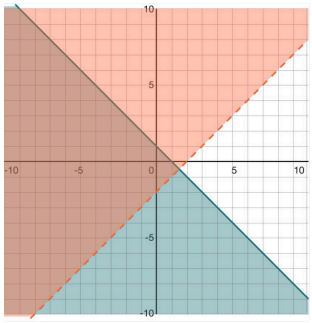
7	Which graph best represents the solution set to this system of inequalities? $x + y < 1$ $x - y \leq 2$ **A**  [correct answer] **B**  **C**  **D** 	A.3(H)	2021/ Question#13	2

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<table>
<tr><th></th><th>Question</th><th>TEKS</th><th>Exam/ Question#</th><th>Unit</th></tr>
<tr><td>8</td><td>The tables of ordered pairs represent some points on the graphs of lines f and g.
<table><tr><th>x</th><th>y</th></tr><tr><td>2</td><td>7</td></tr><tr><td>4</td><td>10.5</td></tr><tr><td>7</td><td>15.75</td></tr><tr><td>11</td><td>22.75</td></tr></table><table><tr><th>x</th><th>y</th></tr><tr><td>-3</td><td>4</td></tr><tr><td>-2</td><td>0</td></tr><tr><td>1</td><td>-12</td></tr><tr><td>4</td><td>-24</td></tr></table>Which system of equations represents lines f and g?

A $y = 1.75x + 3.5$ [correct answer]
$y = -4x - 8$

B $y = 1.75x + 3.5$
$y = -4x - 2$

C $y = 3.5x + 1.75$
$y = -4x - 8$

D $y = 3.5x + 1.75$
$y = -4x - 2$</td><td>A.2(I)</td><td>2021/ Question#24</td><td>2</td></tr>
<tr><td>9</td><td>Which value of x makes the equation $1.25(4x - 10) = 7.5$?

A 305

B -1

C -0.5

D 4 [correct answer]</td><td>A.5(A)</td><td>2019/ Question#3</td><td>1</td></tr>
</table>

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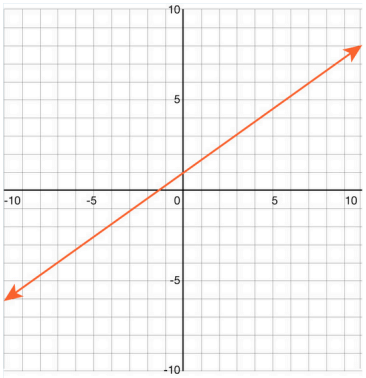
	Question	TEKS	Exam/ Question#	Unit
10	The graph of linear function g passes through the points (−7 , −4) and (7, 6), as shown. What are the slope and y-intercept of the graph of g?  **A** The slope is $\frac{5}{7}$, and the y-intercept is −1. **B** The slope is $\frac{5}{7}$, and the y-intercept is 1. [correct answer] **C** The slope is $\frac{7}{5}$, and the y-intercept is −1 **D** The slope is $\frac{7}{5}$, and the y-intercept is 1.	A.3(C)	2021/ Question#9	1

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