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8.

STAAR Practice Test #2	Name:				
TEKS 3 (Linear Equations)	Block: Date:				
1. (3D) A man bought <i>x</i> boxes of doughnuts for \$3.49 each. He paid with a \$50 bill and received the correct amount of change. If he received more than \$10 but less than \$20, which inequality represents the number of boxes of doughnuts he could have bought?	2. (3A) The slope of the line that passes through the points $(-6, w)$ and $(-10, 4)$ is $\frac{1}{2}$. What is the value of <i>w</i> ?				
F $9 \le x \le 11$ H $8 \le x \le 11$					
G $8 \le x \le 12$ J $9 \le x \le 12$	F 6 G 9 H 4 J 2				
3. (3C) What is the zero of $r(x) = \frac{8}{3}x - 16$?	4. (3B) A senior employee who works 16 hours earns \$39.50 more than a junior employee who works 18 hours. The senior employee earns \$14 per hour. What is the hourly pay in dollars and cents for the junior employee?				
A -16 B -6 C 6 D 16					

5. (3B) Customers at a bank are charged a fee when they exchange U.S. dollars for foreign currency. The function f(x) = 78.5x - 392.5 can be used to determine the number of Japanese yen a customer receives in exchange for x dollars, where x > 5. Which table shows this relationship?

	U.S. Dollars Exchanged	Japanese Yen Received		U.S. Dollars Exchanged	Japanese Yen Received		U.S. Dollars Exchanged	Japanese Yen Received		U.S. Dollars Exchanged	Japanese Yen Received
Α	50	4,317.5	В	65	5,102.5	с	50	3,532.5	D	10	3,140
	75	6,280		80	6,280		85	6,280		25	7,850
	120	9,812.5		100	7,850		120	9,027.5		30	9,420
	185	14,915		125	9,812.5		200	15,307.5		45	14,130
						-					
	ha graph (fling tig	shown on the gr	id Lina w	is stoopor	[- 1		

6. (3E) The graph of line t is shown on the grid. Line w is steeper than line t and has a y-intercept that is below the y-intercept of 7. 10. (3E) If the <u>y-intercept</u> of $y = \frac{1}{2}x - 2$ is decreased by four, describe the effects on its graph and write the new line *t*. Which function could be represented by line *w*? equation. **A** $y = -\frac{2}{3}x - 1$ **B** $y = -\frac{3}{8}x + 4$

$C y = -\frac{4}{3}x + 4$	
D $y = -\frac{1}{4}x - 1$	
(3E) What is the parent function of linear equations?	9. (3A) Identify the slope and y-intercept of the line with the given equation. -12x - 6y = -24

10. (3C) The graph below shows the relationship between the number of gallons of fuel remaining in a truck and the number of hours the truck has been driven. What does the *x*-intercept of the graph represent?

A The number of gallons of fuel in the truck before any driving occurred

B The number of hours the truck was driven before running out of fuel

C The number of gallons of fuel the truck can hold

D The number of hours required to use one gallon of fuel



11. (3D) Airline passengers pay \$439 to fly to California. For this price, customers may check 2 pieces of luggage. There is a fee of \$25 for each additional piece of luggage a passenger wants to check. Which function can be used to find the amount in dollars a passenger has to pay to fly with <i>p</i> pieces of luggage, where $p \ge 2$? A $c = 25p + 439$	12. (3C) A customer pays an annual membership fee of \$85 to a neighborhood car wash. Each time he takes his car to the car wash, he pays only \$7. The total amount of money he spends at the car wash in one year in dollars can be found using the function $y = 7x + 85$. What does the variable x represent in this function?				
B $c = 25(p-2) + 439$	F The total amount of money the customer spends each month at the car wash				
C $c = \frac{p}{25} + 439$	G The number of months the customer has been a member at the car wash				
D $c = \frac{p-2}{25} + 439$	H The number of times the customer takes his car to the car wash in one year				
	J The cost each time the customer takes his car to the car wash				
13. (3E) Two functions are given below. How does the graph	14. (3E) The table represents some points on the graph of				
of p compare with the graph of q ?	linear function g. The graph of q was translated down 10 units				
5 3	to create the graph of function <i>h</i> . Which statement comparing				
$p(x) = \frac{3}{8}x - \frac{3}{11}$	the graphs of g and h is t rue?				
8 3	x g(x)				
$q(x) = \frac{3}{5}x - \frac{3}{11}$	-4 13				
A The graph of <i>n</i> has a different <i>y</i> -intercept than the graph of <i>a</i>	-2 10.5				
The graph of p has a different y intercept than the graph of q.	2 5.5				
B The graph of p is less steep than the graph of q .	8 –2				
C The graph of p is steeper than the graph of q .	F The <i>x</i> -intercept of the graph of g is 10 units to the right of the <i>x</i> -intercept of the graph of h .				
D The graph of p is parallel to the graph of q .	G The graph of g is steeper than the graph of h .				
	H The <i>y</i> -intercept of the graph of <i>g</i> is 10 units above the <i>y</i> -intercept of the graph of <i>h</i> .				
	J The graph of g is less steep than the graph of h.				
15. (3E) Is the line passing through $(8, -4)$ and $(3, 6)$	16. (3E) If the slope of $y = 5x + 1$ is doubled, write the new				
parallel to $y = \frac{1}{2}x - \frac{9}{2}$? Show work and explain	equation. How will the graph of the new equation compare with				
2^{-1} 2^{-1} 2^{-1} 4^{-1} 2^{-1} 4^{-1}	the original equation?				

F 1 2 F С 3 \$10.25 4 5 С 6 Α 7 Y = 2X -6; MOVES DOWN 4 UNITS 8 $\mathbf{Y} = \mathbf{X}$ 9 m = -2 y-intercept = 4 10 В 11 А Η 12 13 В 14 Η 15 No 16 Y = 10x + 1; steeper

Answer Key for Test #2