Algebra 1		Name:		
UNIT 1 TEST		Date:	Block:	
UNLESS OTHERWISE STATED, ALL WORK MU For #1-3 solve the equation. Put a bo	ST BE SHOWN TO RECEIVE CREDI ox around your answer. TEN	<u>T.</u> ( A.5A		
4 21				
1. $2.1x + 4.3 = -7.7 - 3.9x$	2. $11x - 9 = 4(x + 3)$	)	3. $x + 5 - 6x = 25$	
For #4-6 solve the inequality and graph the solution on the number line. TEK A.5B				
4. $-6(x-8) < 72$	$5. \qquad 8\left(1-\frac{k}{2}\right) > -5k+17$		6. $24 - 4x \le -6(x - 7) - x$	
<pre></pre>	<b>&lt;</b>  ++++++++++++++++++++++++++++++++++++	++++≯ 6 8 10		

For #7-9 solve for the indicated variable in each equation or formula. TEK A.12E

7. Solve 
$$9(t-7) = u$$
 for t.  
8. Solve  $Z = \frac{x-m}{s}$  for x.  
9. Solve  $A = \frac{(b_1+b_2)h}{2}$  for h.

10.Suppose x and y are the number of students in two classrooms, where $x < y$ . Compare the expressions by placing the correct symbol in the box below (<, =, or >). TEK A.5B $(2x)^2 \Box (x + y)^2$	11. Shawn is building a pen for his goats that must be 10 feet longer than it is wide. If he has 84 feet of fencing, what are the largest dimensions he can build the pen? тек A.5B		
12. Jaden and Kirby are getting high-sp access at the same time. Jaden's p \$60 for installation and \$42.95 per provider offers free installation an per month. After how many mont Kirby have paid the same amount internet? TEK A.5A	beed internet provider charges month. Kirby's d charges \$57.95 ths will Jaden and for high-speed	13. Brad is selling used bicycles. He makes \$120 per week plus \$10 for each bicycle sold. He wants to earn at least \$400 per week. Write and solve an inequality to find the number of bicycles, b, he must sell each week to accomplish this. TEK A.5B	

14. Claire purchased just enough fencing to border either a rectangular or triangular garden, as shown, whose perimeters are the same.



How many feet of fencing did she buy? Explain your answer. TEK A.5A

- 15. The right triangle has a perimeter of 58 inches.
  - a) Find the value of x. тек A.5A



b) Find the area of the triangle. (Formula for area of a triangle is  $A = \frac{1}{2}bh$ ) **TEK A.5A** 

16. Justin solved the equation below, but did so incorrectly. Circle his mistake and explain what he did wrong. Then solve the equation correctly. тек A.5A

14 - 3s = -8(x - 4) 14 - 3x = -8x + 32 14 = -11x + 32 18 = -11x $-\frac{18}{11} = x$ 

17. Jay can buy the same stereo on Amazon.com or at a local store. If he buys online, the stereo has a 15% discount, but he has to pay a \$12 shipping fee (the stereo is not eligible for Amazon Prime free shipping!). At the local store, the stereo is not on sale, but there is no shipping fee. When (at what regular price point) will the selling price in the store make it cheaper for Jay to buy the stereo online? Justify your answer. TEK A.5B

## STAAR PREP

18. A city employee paints curbs in parking lots and replaces road signs. It takes 0.5 hours to paint a parking lot curb and 2.5 hours to replace a road sign. The function below can be used to find c, the number of parking lot curbs the employee paints when he replaces r road signs in a 40-hour workweek.

$$c = \frac{40 - 2.5r}{0.5}$$

If the employee painted 20 curbs in one week, how many road signs did he replace that week? **TEK A.5A** A. 20

- B. 30
- C. 0
- D. 12

19. Which inequality represents all the values of x for  $y \le -6(x - 18) - 2$  when y = 46? TEK A.5B

- A.  $x \le 10$
- B.  $x \le -11$
- C.  $x \ge -11$
- D.  $x \ge 10$

20. The measure of an obtuse angle is represented by  $(9x + 27)^{\circ}$ . Which is not a possible value for x? TEK A.5B

- A. 7.1
- B. 12.3
- C. 16.9
- D. 6.8
- 21. Which of the following equations represents the formula P = 2l + 2w when solved for the variable w? TEK A.12E
  - A. w = P lB. w = P - 2lC.  $w = \frac{P - l}{2}$ D.  $w = \frac{P - 2l}{2}$