Name:	SINGLETO	N

My Test is On:

Unit 2: Equations and Inequalities STUDY GUIDE

1.	The $\sqrt{33}$ is between what two
	numbers?

J25

136

Between 5 and 6 2. Solve for x.

$$-8(5 + x) = -2x + 14$$

$$-40 - 8x = -2x + 14$$

$$+2x + 2x$$

-6x=54 -6x=54 -6x=54 -6x=54

3. What value of x satisfies the equation?

4(x-2) - 3(x + 2) = 2 4x - 3 - 3x - 6 = 2 x - 14 = 2 x - 14 = 2 x - 14 = 2

4. Explain why 7 is the best whole number estimate of √51. 51 5its between 49

and 64 but is closer to 49 J49=7 V64=8 closer

5. What is the solution to the inequality?

$$\frac{2x + 7 > -11}{2 \times 7 - 18}$$

×>-9

6. Simplify $\sqrt[3]{64}$.

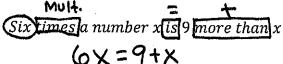
4

7. Morgan already has the following test scores: 98 87 93 and 91 If she wants her test average to be a 93 what score must she earn on her next test? 1962

98 + 87 + 93 + 91 + 2 = 93

 $\frac{5}{1309+x} = 93(5) - \frac{369+x}{369} = \frac{465}{369}$

8. Represent the following statement:



9. The length of a rectangular garden is twice its width, w. The perimeter of the garden is 6 feet. What is the length of the garden?

w=width zw=length <u>zw</u> $\frac{6\omega = 96}{6} \omega = 164$

plug 16 into 2w for langth 2w = 2(16) = 132ft 10. If 21 more than 3 times a number is -24 what is the number? Write and solve an equation to find the number.

21 + 3 × = -24

X = the number

3x=-45 3 3

X=-15

11. If $x^3 = 27$ and $y^3 = 216$, what is the value of x - y?

X3=27

メ=3

Y3=216

Y=6

Take the cube root of each to solve for the variables

12. Bunn's Cakes charges \$4 per person and a \$25 set-up fee to design a cake. Write an equation to find the number of guests (x) that could eat cake at the party if they have a budget of \$1,429 for cake.

X=number of guests

3-6

4X+25=1429 -25 -25 -4X=1404 4 -25-1429

351 guests

X= next test

Unit 2: Equations and Inequalities STUDY GUIDE

- 13. Joe is saving to buy a television that costs \$1150. Joe currently has \$175. saved. He plans to save an additional \$75
- My each week! How many weeks will it take Joe to have \$1150 saved?

X=# of weeks

15. What is the solution to the inequality?

-4(2x + 3) - 10x > 14(x) -8x - 12 - 10x - 7(4x)	$\begin{array}{c} (-8) + 3x \\ -112 + 3x \end{array}$
-18X-12>17X-112 -17X -17X	<u>*</u>
-35X-127-112 +12 +12	X<20
-35X>-100	<u> </u>

17. Which of the following equations gives a solution of "no solution?"

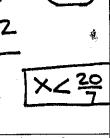
Solution of no solution?

A.
$$3(x + 3) = 9$$
 $3x + 9 = 9$
 $3x = 0$
 $3x = 0$

B + 2x + 7 = +2x + 14 = -14

C.
$$4x + 3 = -4x + 3$$

 $D_{x} - 3 = x - 3$



$$C 4x + 3 = -4x + 3$$

19. Solve: (10)
$$\frac{6}{10}x + \frac{2}{5} = \frac{1}{2}x - \frac{3}{5}$$
 (10)

$$6x + 4 = 5x - 6$$
 $-5x - 5x$
 $x + 4 = -6$
 $-4 - 4$
 $x = -10$

14. The sum of three consecutive even integers is -66.) What is the value of the smallest of the three integers? Set up and solve an equation to find your (x)+(x+2)+(x+4) =66 answer.

X= Smallest# X+2= middle# X+4= largest#

3x+6 =66 X=20

Smallest#

16. Suzie's test scores ar (90) 93) 851 87 and 88 What is the lowest she can score on the next test to achieve an average of at least a 903

(b) 443+× ≥90(6) 443+x 2540

- x 297 At least
- 18. Which of the following equations gives a solution of "all real numbers?" @4x+3 = -4x+3

A. 3(x + 3) = 9

B. -2x + 7 = -2x + 14C. 4x + 3 = -4x + 3

$$(D)x - 3 = x - 3$$

- 20. Translate to an equation and solve to find three consecutive integers whose sum is 54. X= 15+# -19 X+1=2nd#-18 (X)+(X+1)+(X+2)=-54

X+2=3rd#-17 3X+3=-54

-19, -18, -17

Maren	
Name:	

My Test is On:

Unit 2: Equations and Inequalities STUDY GUIDE

21. If the sum	of three consecutive odd
integers is at r	nost 165, what is the largest
of these three	integers? Set up and solve
equation.	(NELVIDILVE)

3×+6≤165

X≤53

22. The length of a rectangle is 3 more than twice its width Its perimeter is 60ft. Find its dimensions.

Draw or use P = 2L + 2W

w= width 3+2w= ler

Make sure to label your answers and use the correct units.

23. A. Solve the inequality: $6r - (3r + 2) \ge -35$

B. Name three possible solutions to the inequality.

6r-(3r+2) Z-35 6r-3r-27-35

34Z-33

Possible Solutions -11,-8,0

24. The equation below is used to find C, the total cost for printing a quantity of books, b. C = 3b + 150

Write an equivalent equation that is solved for b in terms of C. C=36+

150

25. Solve for h if $A = \frac{1}{2}bh$.

26. Solve the following equation for y:

27. The total number of students who could attend a field trip is represented by the variable t. The number of students in Group A is greater than the number of students in Group B. Group A has 3 students more than $\frac{2}{3}$ the total number of students. Group B has 4 less than the total number of students. Write an inequality to represent this situation. DO NOT SOLVE.

t = total Students