

**EXAM REVIEW GRADE 9**  
**Unit 6 – Linear Equations and Inequalities**

Name: \_\_\_\_\_ Class: \_\_\_\_\_

1. Solve the following equations:

a)  $-8 = -4 + x$

b)  $\frac{n}{8} = \frac{-9}{12}$

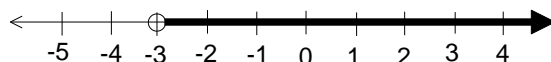
2. a) A number is added to four and the result is doubled to equal twenty-two. Write and solve the equation.

b) Four times a number decreased by 42 is equal to 54 decreased by 2 times the number. What is the number?

3. Solve for x:  $-2x > 64$

4. Solve the inequality:  $6x - 5 < 8x + 1$ .

5. Write an inequality for the following graph?



6. Solve each of the following equations.

A)  $2x - 4 = -3x$

B)  $\frac{x}{7} - 3 = 11$

C)  $2(x - 2) = -2(x + 4)$

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7. Write an inequality for each situation and then graph it.

a) You must be at least 13 years old to watch the movie. \_\_\_\_\_



b) The truck can seat 5 people. \_\_\_\_\_



8. Solve and graph the following inequalities. (15%- 5 marks each)

a)  $-3.5x < 1.3x + 6.6$



b)  $x - 4 > 3x + 12$



c)  $\frac{x}{8} + 10 \geq 20$



9. A taxicab charges \$2.50, plus \$1.78 per kilometre. How long is a trip that costs \$21.19? Write and solve an equation to show your solution.

10. Nadia gets paid \$1000 per month plus 5% commission on her sales. She wants to earn at least \$2200 this month. Write an inequality to represent this situation, then solve it to determine how much Nadia must sell to reach her goal.