

Grade 9 Unit Assessment - Linear Inequalities

Outcome PR4

Single variable linear inequalities

Multiple Choice (5 marks)

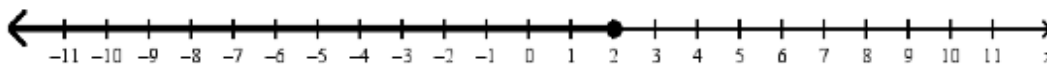
- Circle the choice that best answers the question.

1) Which inequality represents the statement “2 less than a number is more than 8”?

- a) $x + 2 < 8$ b) $x - 2 < 8$ c) $x + 2 > 8$ d) $x - 2 > 8$

1

2) Which inequality is represented by the number line below?



- a) $x > 2$ b) $x \geq 2$ c) $x < 2$ d) $x \leq 2$

1

3) Which of the following is not a possible solution to $2x < -10$?

- a) $x = -5$ b) $x = -6$ c) $x = -7$ d) $x = -8$

1

4) Which inequality is represented by the number line below?



- a) $4 \leq x \leq 9$ b) $4 \leq x < 9$ c) $4 < x < 9$ d) $4 < x \leq 9$

1

5) Which of the following represents the solution to $x + 3 > -5$?

- a) $x > -2$ b) $x > -8$ c) $x < -2$ d) $x < -8$

1

Long Answer (25 marks)

- Show your work to receive full marks!

6) Solve each of the following single-step inequalities:

a) $4x \leq -32$

b) $45 > -5x$

c) $\frac{x}{3} \geq 10$

d) $-8 < \frac{x}{-2}$

7) Solve $-7 + x > -2$ and verify the solution.

8) The cost of your favourite drink is \$3.50 per container. How many containers can you buy with \$15?

a) Define your variable

b) Set up an inequality using your variable

c) Solve the inequality

$\frac{\quad}{4}$

$\frac{\quad}{2}$

$\frac{\quad}{0.5}$

$\frac{\quad}{1}$

$\frac{\quad}{1}$

9) Solve each of the following multi-step inequalities:

a) $2x - 4 < 24$

$\frac{\quad}{2}$

b) $\frac{x}{2} + 3 \geq -9$

$\frac{\quad}{2}$

c) $x - 1 > 13 + 3x$

$\frac{\quad}{2}$

d) $-4(6 + x) \leq 3$

$\frac{\quad}{3}$

e) $-\frac{2}{3} \geq \frac{1}{4}(2x - 8)$

$\frac{\quad}{3}$

10) Lockport Lancers are planning a banquet. The cost of the dinner is \$550 plus \$18 per person. The Lancers need to keep the total costs for the dinner under \$2000. How many people can attend the banquet?

a) Define your variable

$\frac{0.5}{1}$

b) Set up an inequality using your variable

$\frac{1}{2}$

c) Solve the inequality

$\frac{2}{1}$

11) Explain, using words, the difference between a linear equation and a linear inequality.

$\frac{1}{1}$

Connecting math to real life!!!

Where can you see yourself using what you learned about linear inequalities in your daily life? (Besides “I’ll probably need it for grade 10 math next year” 😎)

Score for Linear Inequalities: $\frac{\quad}{30} =$