

**NEW DISCOVERING MATHEMATICS
SECONDARY 2 (GRADE 8)
NON-CALCULATOR PRACTICE**

Name: _____ () Class: _____ Date: _____

Chapter 1 – Linear Inequalities (Worksheet A)

1 Fill in each box with an equality sign.

(a) If $a < b$, then $a + 3$ $b + 3$.

(b) If $c < d$, then $-3c$ $-3d$.

2 Express the following statements using inequalities.

(a) The number of days in February, d , is less than 30.

(b) A quarter of y is at most 2 less than 9.

3 Solve each inequality and represent the solution on a number line.

(a) $3x - 24 > 3$

(b) $4 - 2x \geq 18$

(c) $2x + 3(x + 2) > 4$

(d) $\frac{x}{3} - \frac{x}{4} \leq 1$

4 (a) Solve the inequality $3x + 2 > 5(x - 4)$,

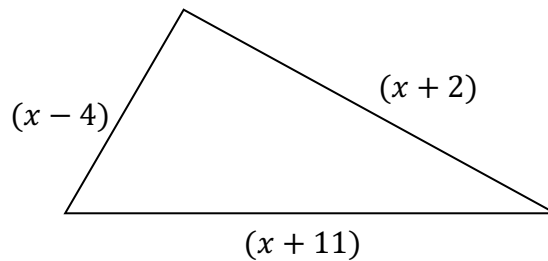
(b) Find the largest integer x that satisfy the inequality in (a).

5 (a) Solve the inequality $2x - 3(x - 1) \leq 0$.

(b) Find the smallest integer x that satisfy the inequality in (a).

6 Find the smallest prime that satisfy the inequality $4x - 11 \leq \frac{3}{2}x - 3$.

- 7 A examination has 3 subjects: English, Mathematics and Science. John scored 32 for English, x for Mathematics and 39 for Science.
- (a) Form an expression for the average score of John's three subjects.
 - (b) Find the minimum score John has to achieve for Mathematics in order to have an average score of at least 35.
- 8 Consider the sequence: 5, 8, 11, 14, 17, ...
- (a) Find, in terms of n , the general term T_n of the sequence.
 - (b) Find
 - (i) the smallest term in the sequence which is greater than 60,
 - (ii) the largest term in the sequence which is less than 100.
- 9 The sides of a triangle are $(x - 4)$ cm, $(x + 2)$ cm and $(x + 11)$ cm.



- Given that the sum of any two sides of a triangle is greater than the third side, write down an inequality to represent the possible values of x , and solve the inequality.
- 10 A brownie cost \$2 and a muffin cost \$5. Kiera buys a total of 10 brownies and muffins.
- (a) Given that Kiera buys x muffins, form an expression, in terms of x , for the total cost of brownies and muffins that Kiera buys.
 - (b) If Kiera had \$40, find the maximum number of muffins that she could have bought.