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

Name: _____ **( ) Class:** _____ **Date:** _____

Chapter 2 – Linear Equations in Two Variables (Worksheet A)

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1 Solve each pair of simultaneous equations by using the elimination method.

(a) $2x + by = -2$ and $4x + y = 8$

(b) $5x + 3y = 14$ and $3x + 5y = 18$

2 Solve each pair of simultaneous equations by using the substitution method.

(a) $y = 2x - 7$ and $y + 5x = 7$

(b) $x + 6y = -2$ and $6x + 12y = 36$

3 Solve each pair of simultaneous equations by using the graphical method.

(a) $y = -\frac{3}{2}x - 1$ and $y = \frac{1}{2}x + 1$

(b) $y = 2x - 9$ and $2y = x - 9$

4 Solve each pair of simultaneous equations.

(a) $-5x + 2y = 20$ and $5x + 3y = 15$

(b) $5x - 3y = -2$ and $7y - 15x = -12$

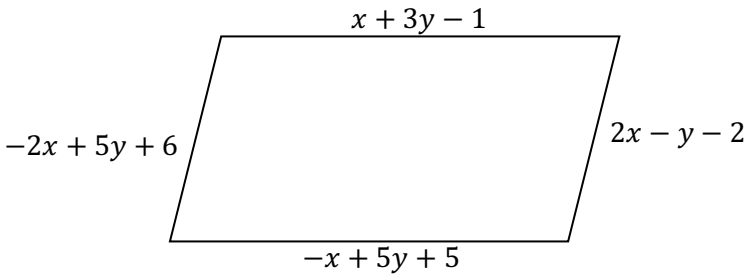
(c) $2x + 3y = 2$ and $50x - 12y = 21$

5 In a box, there are x ants. In another box, there are y spiders.
There are a total of 12 heads and 88 legs.
Assuming no ant nor spider has missing legs, find the number of ants and spiders.

6 The total price of 5 chocolate bars and 3 packs of crackers is \$7.
The total price of 3 chocolate bars and 9 packs of crackers is \$15.
Find the price of each item.

7 A trio of siblings consist of a pair of twins and an elder sister.
The present age of the elder sister is 6 years less than the sum of the present ages of the twins. In 5 years' time, the sum of the ages of the pair of twins and their elder sister is 45.
Find the present ages of each of the twins and their elder sister.

8 The diagram shows a parallelogram, dimensions are given in centimetres.



(a) Find the value of x and of y.
(b) Hence, find the perimeter of the parallelogram.

9 A fraction equals $\frac{2}{5}$ when 12 is added to both the numerator and the denominator.
It is equal to 4 when 12 is subtracted from both the numerator and denominator.
Find the fraction in its lowest term.

10 There are number of boys and girls in a group.
If 12 boys and 4 girls join the group, there will be 3 times as many boys as girls.
If 3 boys and 5 girls leave the group, there will be 7 times as many boys as girls.
Find the original number of boys and girls.