

## Equation

## Unit 4.1

## More Problems on Adding and Subtracting Algebraic Expressions Part I

1. Simplify the expressions as shown below.

Example:

$$\begin{aligned} & (5a - 3b) + (3a - b) \\ &= 5a - 3b + 3a - b \\ &= 8a - 4b \end{aligned}$$

a.  $(2a + b) + (3a + 4b)$

g.  $(3a + b) + (a - 6b)$

b.  $(5a + 3b) + (7a - 5b)$

h.  $(3a + b) + (-a - 6b)$

c.  $(6a + 5b) + (2a - 8b)$

i.  $(3a - b) + (-a + 6b)$

d.  $(x - 5) + (6x + 3)$

j.  $(5a - 3b) + (4a - b)$

e.  $(7a - 5) + (4a - 5)$

k.  $(5a - 3b) + (-4a - b)$

f.  $(4x - 5y) + (8x + y)$

l.  $(5a + 3b) + (-4a + b)$

2. Write either '+' or '-' in the boxes (for a to h) and simplify (i to l).

Example:

$$12 - (7 + 2) = 12 - 7 - 2 = 3$$

$$a - (2b + c) = a - 2b - c$$

$$12 - (-7 - 2) = 12 + 7 + 2 = 21$$

$$a - (-2b - c) = a + 2b + c$$

$$-6a - (-a - 5) = -6a + a + 5 = -5a + 5$$

a.  $x - (y + z)$   
 $= x \square y \square z$

g.  $7x - (3x + 5)$   
 $= 7x - 3x \square 5$

b.  $x - (y + 2z)$   
 $= x \square y \square 2z$

h.  $7x - (3x - 5)$   
 $= 7x \square 3x + 5$

c.  $3x - (2y + z)$   
 $= 3x \square 2y \square z$

i.  $7x - (-3x + 5)$

d.  $3x - (-2y - z)$   
 $= 3x \square 2y \square z$

j.  $-7x - (3x + 5)$

e.  $3x - (2y - z)$   
 $= 3x \square 2y \square z$

k.  $9 - (3x - 4)$

f.  $x - (-y + 3z)$   
 $= x \square y \square 3z$

l.  $-9 - (-3x + 4)$