Level 8
Unit 27.1

Simplifying Algebraic Expressions Part I

Time Taken: ....   Total Score: ....

1. Simplify the expressions as shown below.

> **Example:**
>
> $5(3x + 2y) = 15x + 10y$ $15(-\dfrac{1}{3}x - \dfrac{1}{5}y) = -5x - 3y$
>
> $-2(x - 4y) = -2x + 8y$ $-15(-\dfrac{x}{3} + \dfrac{2}{5}y) = 5x - 6y$

a. $3(2x + y)$

b. $4(x - 6y)$

c. $5(3x - y)$

d. $9(-x - y)$

e. $2(-x + y)$

f. $-3(x - 4)$

g. $-2(x + y)$

h. $10(-\dfrac{1}{2}x + \dfrac{7}{5}y)$

i. $\dfrac{3}{4}(-\dfrac{3}{4}x - \dfrac{1}{3}y)$

j. $3(x - 2y + 3)$

k. $-5(3x - 7y + 1)$

l. $-6(-\dfrac{x}{2} - \dfrac{1}{3}y)$

m. $-18(-\dfrac{5}{6}x - \dfrac{7}{9}y)$

n. $-\dfrac{1}{2}(6x - 4y + 8)$

Level 8
Unit 27.2 **Simplifying Algebraic Expressions Part II**

2. Simplify the expressions as shown below.

> **Example:**
> $4(3x + 1) - 2(3x - 5) = 12x + 4 - 6x + 10 = 6x + 14$

a. $4(x + 3) - 2(x + 1)$

i. $5(x - 3) - 3(4x - 2)$

b. $4(2x - 3) - 2(3x - 1)$

j. $-5(3x - 1) - 2(5x + 4)$

c. $3(4x + 1) - 2(x + 5)$

k. $-(6x - 5) + 5(x + 1)$

d. $3(4x - 1) - 2(x + 5)$

l. $3(x - 2) + 7(x - 3)$

e. $-3(4x - 1) - 2(x - 5)$

m. $-(2x - 5) - 15(\dfrac{x}{5} + 2)$

f. $8(\dfrac{x}{4} + 1) - 3(x - 5)$

n. $(3x - 1) - 12(\dfrac{x}{3} - 1)$

g. $-7(2x - 1) - 2(5x + 4)$

o. $3(x + 4) + 2(3x + 2) + 4(2x - 5)$

h. $5x - 2(x - 5) + 3(x - 4)$

p. $2(3x - 1) - 4(5x + 2) + 6(x + 3)$