

Well done Mr. S.!!

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1. Complete the following table by indicating whether the terms are like or unlike. (10/10)

Terms	Like or Unlike?	Terms	Like or Unlike?
(a) $-3ab, ab$	Like ✓	(b) $9pq^3, -pq^3$	Like ✓
(c) $-3a^2b, ab^2$	Unlike ✓	(d) $11x^2, -19xx$	Like ($x^2 = xx$) ✓
(e) $2x, -y$	Unlike ✓	(f) $-7a^4, -4a^7$	Unlike ✓
(g) $2xyz, 2xy^3z$	Unlike ✓	(h) $x^2y^2, 2xy$	Unlike ✓
(i) $13cd, 13dc$	Like ✓ (because $cd = dc$)	(j) $-3, 1$	Like ✓

2. If possible, **fully** simplify each of the following expressions. (10/10)

(a) $-5x + 3x - 6y + 4y$

$= -2x - 2y$ ✓ ✓

Rough Work

$-5 + 3 = -2$
 $-6 + 4 = -2$

(b) $-5x^2y + 3x^2y + 13xy - 9xy$

$= -2x^2y + 4xy$ ✓ ✓

Rough Work

$-5 + 3 = -2$
 $+13 - 9 = 4$

(c) $-15x^2y - 11xy + 8x^2y - 2xy$

$= -15x^2y + 8x^2y - 11xy - 2xy$ ✓

$= -7x^2y - 13xy$ ✓ ✓

(d) $-15ab^2 - 6a^2b - 13ab^2 - 4a^2b - 10ab$

$= -15ab^2 - 13ab^2 - 6a^2b - 4a^2b - 10ab$ ✓

$= -28ab^2 - 10a^2b - 10ab$ ✓ ✓

3. The **length** of a rectangle is **triple** its width. (6/6)

- (a) Let w represent the width of the rectangle. Label the width and length with algebraic expressions that **contain ONLY** the variable w .

$3w$ ✓



- (b) Write a **simplified expression** for the perimeter of the rectangle.

$P = w + 3w + w + 3w$ ✓
 $= 1w + 3w + 1w + 3w$
 $= 8w$ ✓

- (c) Suppose that the perimeter of the rectangle is 40 cm. Find the value of w .

$P = 40$
 $\therefore 8w = 40$ ✓
 $\therefore w = 5$ ✓