HW SOL 5.2

October 9, 2020   9:06 AM

Name:_____   Date:_____

HW Section 5.2 Like terms and Unlike Terms

1. Indicate whether if each of the following pairs are like terms or not:

a) $7a$ & $-15a$	b) $8xy$ & $3yx$	c) $9a$ & $6a^2$	d) $2ab$ & $13ba^2$	e) $7x^2$ & $7x^3$
y	y	N	N	N

f) $3cab^2$ & $-4ab^2c$	g) $8xy$ & $\boxed{\dfrac{12}{xy}}$	h) $15nm^2$ & $9mn^2$	i) 3^4z^2 & 3^2y^3z	j) $8x^2$ & $3x(x)$
y	N $12x^{-1}y^{-1}$	N	y	y $3x^2$

2. From the list of terms, indicate which ones are like terms with each other:
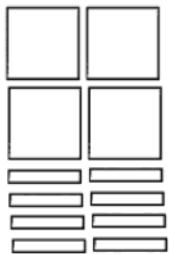
a) $\sqrt{9}, 9x^3, 8x, 22x^2, 12x, 15$	b) $\sqrt{3}x^2, 9x^3, \underline{2x}, 6x^2, \underline{8x}$
$\sqrt{9}$ and 15 , $8x + 12x$	$2x$ and $8x$, $\sqrt{3}x^2$ and $6x^2$.

c) $12b^2, 8ab, \underline{9b}, 13ba, \sqrt{2}b^2$	d) $\underline{5x^2}, \sqrt{7}yx, 12x^2, \sqrt{3}xy, \sqrt{2}x(3x)$
$12b^2$ and $\sqrt{2}b^2$, $8ab$ and $13ba$ $8ab + 13ba = 21ab$ $8ab + 13a^2b =$	$\sqrt{7}yx$ and $\sqrt{3}xy$ $5x^2$ and $12x^2$ are $\sqrt{2}x^2$

3. Simplify each of the following below:

a)

$-2x^2 + 5x + 7$

b)

$3x^2 + 8x + 11$

c)

$x^2 + 5x$

d)

$-6x^2 + 12x + (-10)$

e)

$6x^2 + x + 2$

f)
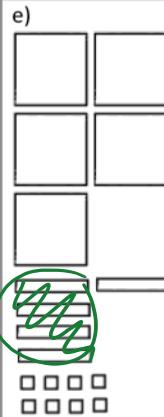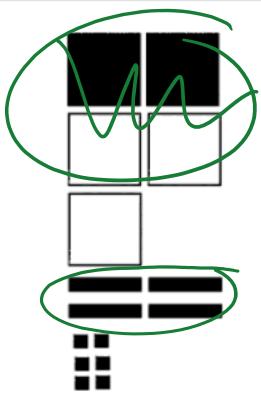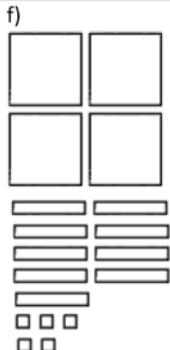
$2x^2 + 6x + 7$

4. Simplify each of the following below:

a) $-5k + 6k + 12k$

$13k$

b) $8y + 5z - 3y + 4z$

$5y + 9z$

|	
c) $5x^2 - 6x - 3x^2 + 14x$ $2x^2 + 8x$	d) $5x - 9y - 12 + 2x + 5y - 8$ $7x - 4y - 20$
e) $6m^2 - 5m + 9 + 2m^2 + 7 - 6m$ $8m^2 - 11m + 16$	f) $4x^2y - 6xy^2 + 7xy - 12xy + 10xy^2 - 15x^2y$ $-11x^2y + 4xy^2 - 5xy$.
g) $-5xy - 8xy^2 + 7yx - 12xy + 11xy^2 - 5x^2y$ $-5x^2y + 3xy^2 - 10xy$	h) $-8x^2y^3 - 6x^3y^2 + 9xy - 12yx + 13x^3y^2 - 15x^2y^3$ $-23x^2y^3 + 7x^3y^2 - 3xy$

5. Write an expression for the perimeter of the figure below.

$3x^2 - 7x + 20$

$5x - 3$

$8x^2 + 6x - 9$

$P = (2x+4) + (2x+4) + (5x-3) + (5x-3)$

$P = 14x + 2$

① Half of Perimeter $= 11x^2 - x + 11$

② Full Perimeter $= 22x^2 - 2x + 22$

6. Determine the perimeter of the figure below.

x

$2x$

$x+3$

$2x+5$

$5x-4$

$P = 11x + 4$

$\leftarrow 8x + 11 \rightarrow$

$7x^2 + 5x$

$3x$

$8x + 11$

$P = 2(7x^2 + 13x + 11)$

$= 14x^2 + 26x + 22$