

Name _____

Date _____

Extra Review of Polynomials #2

1) Simplify: $9g + g - 3g - 8g =$ _____ $7x - 8 + 4x - 15 =$ _____

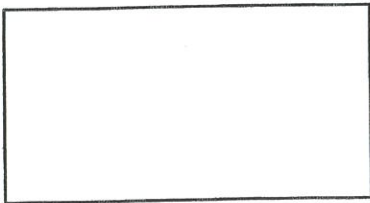
2) Simplify: $2y^2 - 9y - 15y^2 + 23 + 25 - 2y =$ _____

3) Simplify: $8(y - 2) - 9y =$ _____

4) Add: $(4x^2 - 2x - 7) + (3x^2 - 8x + 9) =$ _____

5) Add:
$$\begin{array}{r} 2x^2 + 5x + 11 \\ + 5x^2 - 4x - 9 \\ \hline \end{array}$$

6) Find the perimeter of a rectangle whose length is represented by $4x + 9$ and whose width is represented by $3x - 2$.



7) Subtract: $(9x^2 - 5x + 14) - (5x^2 - 3x + 8) =$ _____

8) Subtract $2x^2 - 7x + 4$ from $9x^2 - 3x + 15$

9) From $3x^2 + 2x - 1$ subtract $x^2 - 5x - 4$

10) Multiply:

$$(7x)(4x) = \underline{\hspace{2cm}}$$

$$(5r^3w^7)(-3r^5w^2) = \underline{\hspace{2cm}}$$

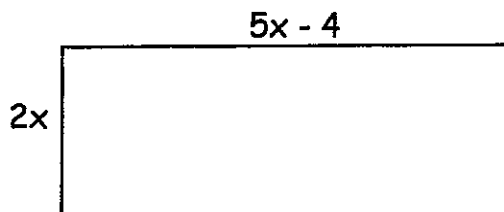
$$(9g^4h)(-3gh) = \underline{\hspace{2cm}}$$

$$3y(4y - 7) = \underline{\hspace{2cm}}$$

$$8m(3m^3 - m + 5) = \underline{\hspace{2cm}}$$

11) Find the area of a rectangle whose length is $4x + 7$ and whose width is $3x$.

12) Find the area of the following rectangle.



13) Simplify:

$$(y - 8)(y + 7) = \underline{\hspace{2cm}} \quad (y - 6)(y - 9) = \underline{\hspace{2cm}} \quad (4y + 3)(2y + 5) = \underline{\hspace{2cm}}$$

$$(2y - 8)(5y + 7) = \underline{\hspace{2cm}}$$

$$(y + 4)^2 = \underline{\hspace{2cm}}$$

14) Divide:

$$\frac{-25z^8}{5z^2} = \underline{\hspace{2cm}}$$

$$\frac{24x^7y^3}{8x^2y} = \underline{\hspace{2cm}}$$

$$\frac{18m^6n^4}{3m^2n^2} = \underline{\hspace{2cm}}$$

$$\frac{9g^2 - 18g^5 + 6g}{3g} = \underline{\hspace{2cm}}$$

15) If the area of a rectangle is represented by $8m^8 + 16m^5 - 34m^3$ and the width is represented by $2m^3$ what is the length of the rectangle?



Extra Review of Polynomials #2

1) Simplify: $9g + 1g - 3g - 8g = \underline{-1g = -g}$ $(7x) - 8 + (4x) - 15 = \underline{11x - 23}$

2) Simplify: $(2y^2) - 9y - (15y^2) + 23 + 25 - 2y = \underline{-13y^2 - 11y + 48}$

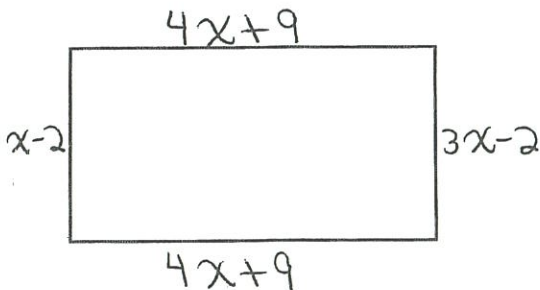
3) Simplify: $8(y - 2) - 9y = \underline{-y - 16}$
 $(8y) - 16 - 9y$

4) Add: $(4x^2 - 2x - 7) + (3x^2 - 8x + 9) = \underline{7x^2 - 10x + 2}$

$$\begin{array}{r} 4x^2 - 2x - 7 \\ + 3x^2 - 8x + 9 \\ \hline 7x^2 - 10x + 2 \end{array}$$

5) Add: $\begin{array}{r} 2x^2 + 5x + 11 \\ + 5x^2 - 4x - 9 \\ \hline 7x^2 + x + 2 \end{array}$

6) Find the perimeter of a rectangle whose length is represented by $4x + 9$ and whose width is represented by $3x - 2$.



$P =$ sum of all sides

$$\begin{array}{r} 4x + 9 \\ 4x + 9 \\ 3x - 2 \\ + 3x - 2 \\ \hline 14x + 14 \end{array}$$

7) Subtract: $(9x^2 - 5x + 14) - (5x^2 - 3x + 8) = \underline{4x^2 - 2x + 6}$
 $9x^2 - 5x + 14 - 5x^2 + 3x - 8$

$$\begin{array}{r} 9x^2 - 5x + 14 \\ + (-5x^2 + 3x - 8) \\ \hline 4x^2 - 2x + 6 \end{array}$$

8) Subtract $2x^2 - 7x + 4$ from $9x^2 - 3x + 15$

$$\begin{array}{r} 9x^2 - 3x + 15 \\ \oplus -2x^2 + 7x - 4 \\ \hline 7x^2 + 4x + 11 \end{array}$$

OR

$$(9x^2 - 3x + 15) - 1(2x^2 - 7x + 4)$$

$$9x^2 - 3x + 15 - 2x^2 + 7x - 4$$

$$7x^2 + 4x + 11$$

9) From $3x^2 + 2x - 1$ subtract $x^2 - 5x - 4$

$$\begin{array}{r} 3x^2 + 2x - 1 \\ \oplus -x^2 + 5x + 4 \\ \hline 2x^2 + 7x + 3 \end{array}$$

$$(3x^2 + 2x - 1) - 1(x^2 - 5x - 4)$$

$$3x^2 + 2x - 1 - 1x^2 + 5x + 4$$

$$2x^2 + 7x + 3$$

10) Multiply:

$$(7x)(4x) = 28x^2$$

$$(5r^3w^7)(-3r^5w^2) = -15r^8w^9$$

$$(9g^4h)(-3gh) = -27g^5h^2$$

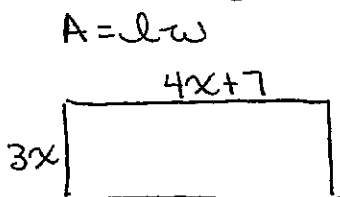
$$-15r^8w^9$$

$$-27g^5h^2$$

$$3y(4y - 7) = 12y^2 - 21y$$

$$8m(3m^3 - m + 5) = 24m^4 - 8m^2 + 40m$$

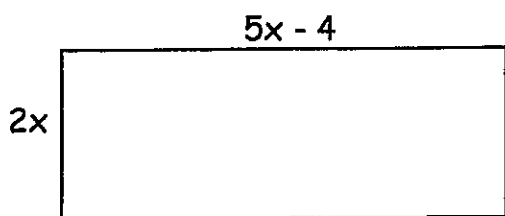
11) Find the area of a rectangle whose length is $4x + 7$ and whose width is $3x$.



$$A = 3x(4x + 7)$$

$$A = 12x^2 + 21x$$

12) Find the area of the following rectangle.



$A = lw$

$$A = 2x(5x - 4)$$

$$A = 10x^2 - 8x$$

13) Simplify:

$$(y-8)(y+7) = \underline{\hspace{2cm}}$$

$$y^2 + 7y - 8y - 56$$

$$\boxed{y^2 - y - 56}$$

$$(y-6)(y-9) = \underline{\hspace{2cm}}$$

$$y^2 - 9y - 6y + 54$$

$$\boxed{y^2 - 15y + 54}$$

$$(4y+3)(2y+5) = \underline{\hspace{2cm}}$$

$$8y^2 + 20y + 6y + 15$$

$$\boxed{8y^2 + 26y + 15}$$

$$(2y-8)(5y+7) = \underline{\hspace{2cm}}$$

$$10y^2 + 14y - 40y - 56$$

$$\boxed{10y^2 - 26y - 56}$$

$$(y+4)^2 = \underline{\hspace{2cm}}$$

$$(y+4)(y+4) =$$

$$y^2 + 4y + 4y + 16 =$$

$$\boxed{y^2 + 8y + 16}$$

14) Divide:

$$\frac{-25z^8}{5z^2} = \boxed{-5z^6}$$

$$\frac{24x^7y^3}{8x^2y} = \boxed{3x^5y^2}$$

$$\frac{18m^6n^4}{3m^2n^2} = \boxed{6m^4n^2}$$

$$\frac{9g^2 - 18g^5 + 6g}{3g} = \boxed{3g - 6g^4 + 2}$$

15) If the area of a rectangle is represented by $8m^8 + 16m^5 - 34m^3$ and the width is represented by $2m^3$ what is the length of the rectangle?

$$l = \frac{8m^8 + 16m^5 - 34m^3}{2m^3}$$

$$\boxed{= 4m^5 + 8m^2 - 17}$$

