Name: _____

Adding and Subtracting Polynomials

A) Add.

1) $\begin{array}{r} x - y \\ x + y \\ \hline \end{array}$

2) $\begin{array}{r} -w + 4 \\ 2w - 3 \\ \hline \end{array}$

3) $\begin{array}{r} -3x^2 + 5x - 2 \\ x^2 - 5x - 6 \\ \hline \end{array}$

4) $\begin{array}{r} x^3 + 3x^2 - 5x - 2 \\ -x^3 + 8x^2 + 3x - 7 \\ \hline \end{array}$

5) $\begin{array}{r} -\frac{1}{8}x^2 - \frac{1}{3}x + \frac{1}{5} \\ -x^3 + \frac{3}{8}x^2 \qquad - \frac{2}{5} \\ (+)\ -3x^3 \qquad - \frac{2}{3}x + \frac{4}{5} \\ \hline \end{array}$

6) $\begin{array}{r} -3x^4 \quad + 2x^2 - x + 5 \\ (+) \quad - 2x^3 \quad + 5x - 7 \\ \hline \end{array}$

B) Subtract

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

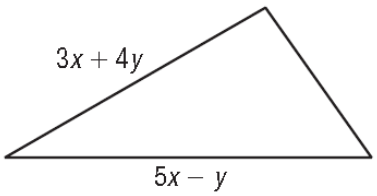
8) $\begin{array}{r} -x^2 + 3x - 5 \\ 5x^2 - 2x - 7 \\ \hline \end{array}$

9) $\begin{array}{r} 4x + 3 \\ 2x - 6 \\ \hline \end{array}$

10) $\begin{array}{r} 5x + 2 \\ 4x - 3 \\ \hline \end{array}$

C) 11) Find the result in simplest form if you are subtracting $\left(-2x^2-4x+3\right)$ from $4x^2-8x+11$ then adding the result to $7x^2-3x+15$

D) The measures of two sides of a triangle are given. If *P* is the perimeter, and *P* = 10*x* + 5*y*,

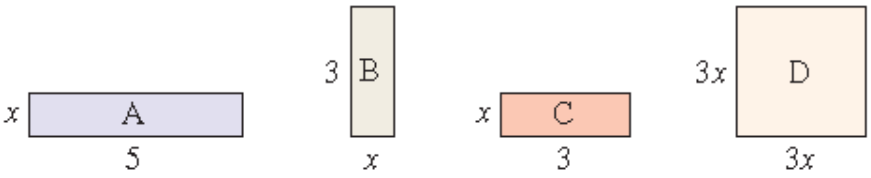


12) Find the measure of the third side.

E) 13) Find the difference when $32x^2-17x+45$ is subtracted from the sum of $23x^2-12x-7$ and $-11x^2+12x+7$

F) Find the sum of the areas of the shaded rectangles:

14)



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