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### 7.1 Operations with Polynomials Review

| What you need to know \& be able to do | Things to remember | Exa | ples |
| :---: | :---: | :---: | :---: |
| 1. Classify polynomials | Degree: <br> $x^{3}$ : cubic <br> $x^{2}$ : quadratic <br> $x$ : linear <br> \#: constant <br> Number of Terms: <br> 1: Monomial <br> 2: Binomial <br> 3: Trinomial <br> 4+: Polynomial <br> Make sure your expressions are simplified first! | 1. $5 x-7$ | 2. -18 |
|  |  | 3. $-2 x^{2}+8+3 x^{2}$ | 4. $4 x^{2}+3 x-10+2(x-4)$ |
| 2. Add and Subtract Polynomials | -Line up like terms <br> -If subtracting, change subtraction sign to addition and change the signs of every term in the $2^{\text {nd }}$ polynomial | 5. $\left(4 x+3 x^{2}-7\right)+\left(-6 x^{2}+4\right)$ | 6. $\left(4 x^{2}-3 x-2\right)-\left(9 x^{2}+3 x-7\right)$ |
| 3. Multiply polynomials | -Distributive Method or Area Method$-x \cdot x=x^{2}$ | 7. $5 \mathrm{x}(3 \mathrm{x}+7)$ | 8. $(x-9)(x+6)$ |
|  |  | 9. $(x+4)^{2}$ | 10. $(6 x+3)(4 x-8)$ |
| 4.Area \& Perimeter | Perimeter: Add up all outside sides <br> Area: <br> Rectangle: $A=I \times w$ Triangle: $\mathrm{A}=1 / 2 \mathrm{bh}$ | 11. Find the area \& perimeter of the following: | 12. The area of a rectangle is $x^{2}+7 x+6$. What is the perimeter of this rectangle? |

A. The measure of the perimeter of a triangle is $37 x+42$. It is known that two of the sides of the triangle have measures of $14 x+16$ and $10 x+20$. Find the length of the third side (Day 2 HW ):
B. Find the area of the shaded region (Day 3 HW ):

$5 \mathrm{x}-2$
C. Find the area of the shaded region (Day 3 HW ):


