

Name: \_\_\_\_\_

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Instructor: \_\_\_\_\_

Date: \_\_\_\_\_

Class Time: \_\_\_\_\_

## Unit 7 Module C Notes Sections 18.8, 20.8

*View the PowerPoint, Videos, or Textbook for Module 7C.*

Vocabulary **Fill in the blanks.**

- (Section 18.8) To divide a polynomial by a monomial, divide each \_\_\_\_\_ of the \_\_\_\_\_ by the \_\_\_\_\_.
- (Section 20.8) **The Work Principle** states that if  $a$ =the time it takes A to do a job, and  $b$ =the time it takes B to do the job, then  $t$  will be the time it takes them to do the job when they work together in this equation:  $\frac{a}{t} + \frac{b}{t} = \frac{1}{t}$
- (Section 20.8) **Motion Formulas** include the following forms:
  - $d = \underline{\hspace{2cm}}$
  - $r = \underline{\hspace{2cm}}$
  - $t = \underline{\hspace{2cm}}$
- (Section 20.8) The equality of ratios,  $\frac{A}{B} = \frac{C}{D}$ , is called a \_\_\_\_\_.
- (Section 20.8) In similar triangles, \_\_\_\_\_ have the same measure, and \_\_\_\_\_ are proportional.

Problems **Perform the indicated operation and simplify your answer. Show ALL steps.**

1. (Section 18.8)  $(28x^3 + 4x^2 - 6x) \div (2x)$

2. (Section 18.8) Divide:

$$\frac{72x^2 + 54x - 5}{6x + 5}$$

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3. (Section 18.8) Rewrite  $\frac{wyz^{-7}}{xy^{-4}z^2}$  using only positive exponents.

4. (Section 18.8) Divide  $(12x^3 - 10x^2 - x + 4) \div (3x - 1)$

\_\_\_\_\_ with R= \_\_\_\_\_

5. (Section 20.8) It takes Maria 4 hours to do her Math homework. Tony does the same assignment in 3 hours. How long would it take the two of them, working together, to do the assignment?

\_\_\_\_\_

6. (Section 20.8) Jean cross-country skis 5 km/hr slower than Richard. In the time that it takes Jean to ski 42 km, Richard can ski 57 km. How fast do each of them ski?

Jean skis \_\_\_\_\_ km/hr

Richard skis \_\_\_\_\_ km/hr.