Mathematics9 Date _____

Unit 7 Multiplying & Dividing Polynomials
7.3 Dividing Polynomials by Monomials

Ex. Simplify:

a) $\frac{6x-3}{3}$

* split up into a series of mono/mono divisions

$= \frac{6x}{3} \quad \frac{-3}{3}$

$= 2x - 1$

b) $\frac{3x^3+6x}{3x}$

$= \frac{3x^3}{3x^1} + \frac{6x}{3x}$

$= x^2 + 2$

*check

$3x(x^2+2)$

$= 3x^3 + 6x$ ✓

c) $\frac{10a^5-15a^3+5a^2}{-5a^2}$

$= \frac{10a^5}{-5a^2} \quad \frac{-15a^3}{-5a^2} \quad \frac{+5a^2}{-5a^2}$

$= -2a^3 + 3a - 1$

d) $\frac{15x^4y^3-12x^2y^2}{-3x^2y}$

$= \frac{15x^4y^3}{-3x^2y^1} \quad \frac{-12x^2y^2}{-3x^2y}$

$= -5x^2y^2 + 4y$

Ex. A rectangle has an area of $36x^2 + 18x$, if the width is $9x$ determine an expression for the length.

$A = l \times w$

$l = \frac{A}{w}$

$= \frac{36x^2+18x}{9x}$

$= \frac{36x^2}{9x} \quad \frac{+18x}{9x}$

$= 4x + 2$

Practice: Worksheet (#77) – show work on separate sheet (split & divide)
pg. 276/ # 8, 10 – 14