Math 60, Sections 2.7-2.8 Review

Name: _Solutions_

1. Simplify the following expressions if possible. If already simplified, then write cannot be simplified or rewrite the expression.

a. $y^3 + y^3 = 2y^3$

b. $y^3 \cdot y^3 = y^6$

c. $\left(y^3\right)^5 = y^{15}$

d. $y \cdot y^3 = y^4$

e. $-p^4 - 3p^4 = -4p^4$

f. $-11p^7 \cdot 4p^3 = -44p^{10}$

g. $-9p^4 - p^9$ cannot be simplified

h. $\left(5p^4\right)^3 = 5^3 p^{12}$ or $125p^{12}$

2. Find the product of the monomial and the binomial.

a. $-3x^2 \left(5x - 2\right)$

$$= -15x^3 + 6x^2$$

b. $\dfrac{1}{8}t\left(t + 12\right)$

$$= \frac{1}{8}t^2 + \frac{1}{8}t \cdot \frac{\cancel{12}^{3}}{\cancel{8}_{2}} = \frac{1}{8}t^2 + \frac{3}{2}t$$

c. $-5x^2 \left(x - 11\right)$

$$-5x^3 + 55x^2$$

d. $8p^2 \left(-2p^2 + p\right)$

$$-16p^4 + 8p^3$$

3. Simplify completely.

a. $2y - 9y\left(-3 - y^5\right)$

$$2y + 27y + 9y^6$$

$$29y + 9y^6$$

b. $-3\left(-2x + 5\right) - 5\left(-7x - 1\right)$

$$\underline{6x - 15} + \underline{35x + 5}$$

$$41x - 10$$

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