Math 9   6.7 Multiplying and Dividing Monomials   Name: Key
Simplify the following completely

1. $3a(4a^2 - 2a + 5)$

$$12a^3 - 6a^2 + 15a$$

2. $(-2xy^2 + 4xy - 1)(-3x)$

$$6x^2y^2 - 12x^2y + 3x$$

3. $(15a^2 - 25a + 20) \div (-5)$

$$-3a^2 + 5a - 4$$

4. $(-32m^2n^2 + 8mn - 24mn^2) \div (8mn)$

$$-4mn + 1 - 3n$$

5. Find the area of a rectangle with a
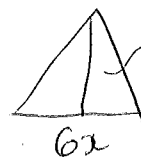   width of 3x and a length of $2x - 5$

$$A = 3x(2x - 5)$$

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

6. A rectangle has an area of
   $24x^2y + 16xy$ and a width of 8xy.
   Find the length.

$$L = \frac{24x^2y + 16xy}{8xy}$$

$$= 3x + 2$$

BONUS

7. Find the area of the triangle with a
   base of 6x + 2 and a height of 4x – 8.

$$A = \frac{6x(4x - 8)}{2}$$

$$= \frac{24x^2 - 48x}{2}$$

$$= 12x^2 - 24x$$

8. $\dfrac{4ab - 7a + 8a^2}{2a}$

$$2b - \frac{7}{2} + 4a$$

9. $(-3x)() = 12xy - 15x^2$

$$\frac{12xy}{-3x} - \frac{15x^2}{-3x} = -4y + 5x$$

10. $[2x(x - 12) + x(x + 9)] \div (-3x)$

$$[2x^2 - 24x + x^2 + 9x] \div (-3x)$$

$$\frac{3x^2 - 15x}{-3x}$$

$$= -x + 5$$