

Name _____

Homework 1
Basic Skills Review

The material on this assignment is covered in Appendix A of the textbook.

1. (1ea) For each of the following, evaluate and simplify the expression for the indicated value.

(a) $\frac{1}{2x^2}$ for $x = 3$

(b) $\frac{2z - 1}{z - 1}$ for $z = \frac{1}{3}$

(c) $t^2 - 5t + 3$ for $t = -2$

2. (1ea) Solve the following inequalities for x :

(a) $8 - 4x \geq 0$

(b) $2x + 3 \leq 4 - 3x$

(c) $7 \leq 2x + 1 < 12$

(d) $9 - x^2 \geq 0$ (this one is tricky– be careful)

3. (2ea) Write each polynomial below in simplified form.

(a) $(3x^2 + 8) - (x^2 - 1)$

(b) $(x + 2)(x + 3) - x$

(c) $(x + 3)^2 + 2(x + 3)$

4. (1ea) Solve each of the following equations for y :

(a) $4x - y^2 = 3$

(b) $4x + 3y - 2xy = 8$

(c) $2y + x = 5 - x^2y$

5. (1ea) Express the following using interval notation:

(a) $-20 \leq x < 8$

(b) $t \geq 2$

6. (1ea) Express the following using inequalities:

(a) $(-\infty, -3)$

(b) $(-4, 25]$