

Second Quiz
February 24, 2011

Name: _____

1. For which real values of the variable x is the expression $\sqrt{4 - 2x}$ defined as a real number?

2. Simplify:

(a) $\sqrt{27} - 5\sqrt{12} + 7\sqrt{3}$

(b) $(2 + \sqrt{6})(\sqrt{2} - \sqrt{15})$

3. Rationalize the denominator: $\frac{\sqrt{3} - 2\sqrt{5}}{\sqrt{2} + \sqrt{3}}$

4. Simplify assuming that all variables represent non-negative real numbers:

(a) $\sqrt{75x^5y^7z^8}$

(b) $\sqrt{\frac{75x^2y^5}{64z^8}}$