

Chapter 7 Quiz 2 (7-4 to 7-5)

Short Answer MUST SHOW ALL WORK STEP BY STEP TO SHOW THAT YOU CAN SIMPLIFY EACH EXPRESSION WITHOUT A CALCULATOR. 1/2 CREDIT IS THE WORK.

Simplify.

1. $\sqrt[4]{81a^{16}b^8}$

4. $(\sqrt{19} - \sqrt{9})^2$

2. Simplify $\sqrt{216x^7y^{12}}$.

5. $\sqrt{162} - \sqrt{448} + \sqrt{32} + \sqrt{175}$

Simplify.

3. $\frac{\sqrt{2}}{6 - \sqrt{5}}$

Chapter 7 Quiz 2 (7-4 to 7-5)

Answer Section

SHORT ANSWER

1. ANS:

$$3a^4b^2$$

Find the principal square root of each term of the radicand.

PTS: 1 DIF: Average REF: Lesson 7-4 OBJ: 7-4.1 Simplify radicals.

STA: MA.912.A.10.3

TOP: Simplify radicals.

KEY: Radicals | Simplify Radicals

2. ANS:

$$6x^3y^6\sqrt{6x}$$

Factor into squares where possible. Use the Product Property of Radicals to simplify.

PTS: 1 DIF: Average REF: Lesson 7-5

OBJ: 7-5.1 Simplify radical expressions with multiplication. STA: MA.912.A.6.2

TOP: Simplify radical expressions with multiplication.

KEY: Radical Expressions | Simplify Radical Expressions

3. ANS:

$$\frac{6\sqrt{2} + \sqrt{10}}{31}$$

Multiply the numerator and denominator by the conjugate of the denominator and simplify.

PTS: 1 DIF: Average REF: Lesson 7-5 OBJ: 7-5.5 Divide radical expressions.

STA: MA.912.A.6.2

TOP: Divide radical expressions.

KEY: radical expressions

4. ANS:

$$28 - 2\sqrt{171}$$

Find the square of the expression and simplify for the same radicands and numbers.

PTS: 1 DIF: Average REF: Lesson 7-5 OBJ: 7-5.4 Multiply radical expressions.

STA: MA.912.A.6.2

TOP: Multiply radical expressions.

KEY: radical expressions

5. ANS:

$$13\sqrt{2} - 3\sqrt{7}$$

Find the principal square root of each term of the radicand and simplify the expression.

PTS: 1 DIF: Average REF: Lesson 7-5

OBJ: 7-5.3 Add and subtract radical expressions.

STA: MA.912.A.6.2

TOP: Add and subtract radical expressions.

KEY: radical expressions