

**MA90 Exercises for section 8.4 Addition and Subtraction of Radicals****Short Answer**

1. Simplify each term, if necessary, and then use the distributive property to combine terms, if possible.

$$5\sqrt{2} + 6\sqrt{2}$$

.

2. Simplify each term, if necessary, and then use the distributive property to combine terms, if possible.

$$4\sqrt{3} - 7\sqrt{3}$$

.

3. Simplify each term, if necessary, and then use the distributive property to combine terms, if possible.

$$\sqrt{7} + 15\sqrt{7}$$

.

4. Simplify each term, if necessary, and then use the distributive property to combine terms, if possible.

$$\sqrt{44} + 2\sqrt{11}$$

.

Name: \_\_\_\_\_

ID: A

5. Simplify each term, if necessary, and then use the distributive property to combine terms, if possible.

$$\frac{1}{3} \sqrt{54} + \frac{1}{5} \sqrt{150}$$

6. Simplify each term, if necessary, and then use the distributive property to combine terms, if possible.

$$\frac{3}{4} \sqrt{8} - \frac{5}{6} \sqrt{18} - \frac{7}{8} \sqrt{32}$$

7. Simplify each term, if necessary, and then use the distributive property to combine terms, if possible.

$$7\sqrt{48} - 3\sqrt{12} + 4\sqrt{27}$$

Name: \_\_\_\_\_

ID: A

8. All variables in the problem below represent positive real numbers. Simplify each term, and combine, if possible.

$$5\sqrt{x^3} + 2x\sqrt{x}$$

9. The variable in the problem below represents a positive real number. Simplify each term, and combine, if possible.

$$6\sqrt{50x^2} - x\sqrt{72}$$

10. Simplify the expression.

$$\frac{33 - \sqrt{126}}{21}$$

11. Simplify the expression.

$$\frac{-14 + \sqrt{28}}{14}$$

**MA90 Exercises for section 8.4    Addition and Subtraction of Radicals  
Answer Section****SHORT ANSWER**

1. ANS:  
 $11\sqrt{2}$   
  
PTS: 1
2. ANS:  
 $-3\sqrt{3}$   
  
PTS: 1
3. ANS:  
 $16\sqrt{7}$   
  
PTS: 1
4. ANS:  
 $4\sqrt{11}$   
  
PTS: 1
5. ANS:  
 $2\sqrt{6}$   
  
PTS: 1
6. ANS:  
 $-\frac{9}{2} \cdot \sqrt{2}$   
  
PTS: 1
7. ANS:  
 $34\sqrt{3}$   
  
PTS: 1
8. ANS:  
 $7x \cdot \sqrt{x}$   
  
PTS: 1
9. ANS:  
 $24x \cdot \sqrt{2}$   
  
PTS: 1

10. ANS:

$$\frac{11 - \sqrt{14}}{7}$$

PTS: 1

11. ANS:

$$\frac{-7 + \sqrt{7}}{7}$$

PTS: 1