

# REVIEW: Adding and Subtracting Square Root Expressions

Name \_\_\_\_\_

## Key Concept and Vocabulary

You can add or subtract radical expressions the same way you combine like terms, such as  $5x + 4x = 9x$ .

Adding and subtracting



Adding:  $5\sqrt{3} + 4\sqrt{3} = 9\sqrt{3}$

Subtracting:  $5\sqrt{3} - 4\sqrt{3} = \sqrt{3}$

## Skill Examples

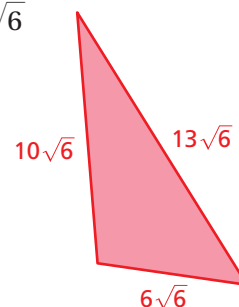
1.  $12\sqrt{5} + 4\sqrt{5} = (12 + 4)\sqrt{5}$   
 $= 16\sqrt{5}$

2.  $9\sqrt{10} - 7\sqrt{10} = (9 - 7)\sqrt{10}$   
 $= 2\sqrt{10}$

## Application Example

3. What is the perimeter of the triangle?

Perimeter =  $10\sqrt{6} + 13\sqrt{6} + 6\sqrt{6}$   
 $= (10 + 13 + 6)\sqrt{6}$   
 $= 29\sqrt{6}$



## PRACTICE MAKES PURR-FECT®



Check your answers at [BigIdeasMath.com](http://BigIdeasMath.com).

Simplify the expression.

4.  $5\sqrt{7} + 4\sqrt{7} =$  \_\_\_\_\_

5.  $15\sqrt{17} - 6\sqrt{17} =$  \_\_\_\_\_

6.  $2\sqrt{14} + 3\sqrt{14} =$  \_\_\_\_\_

7.  $7\sqrt{26} + 11\sqrt{26} =$  \_\_\_\_\_

8.  $9.5\sqrt{6} - 5.6\sqrt{6} =$  \_\_\_\_\_

9.  $1.6\sqrt{13} + 3.8\sqrt{13} =$  \_\_\_\_\_

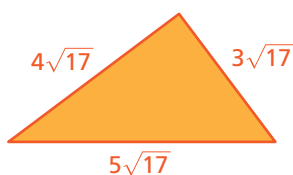
10.  $2\sqrt{5} - 7\sqrt{5} =$  \_\_\_\_\_

11.  $\frac{7}{4}\sqrt{15} - \frac{3}{4}\sqrt{15} =$  \_\_\_\_\_

12.  $\frac{11}{8}\sqrt{11} + \frac{5}{8}\sqrt{11} =$  \_\_\_\_\_

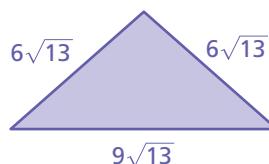
Find the perimeter of the figure.

13.



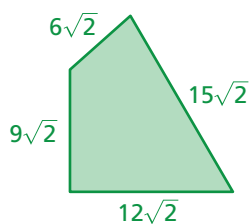
Perimeter = \_\_\_\_\_

14.



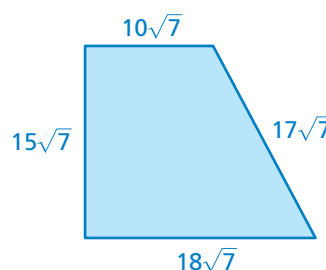
Perimeter = \_\_\_\_\_

15.



Perimeter = \_\_\_\_\_

16.



Perimeter = \_\_\_\_\_