

WS - Pythagorean Theorem and  
Radicals

Name \_\_\_\_\_  
Date \_\_\_\_\_ Period \_\_\_\_

All answers should be exact. Radicals should be in simplest form.

1.  $(4\sqrt{3})^2$

2.  $(7\sqrt{2})^2$

3.  $(x + 5)^2$

4.  $(2x - 3)^2$

5. The legs of a triangle are  $2\sqrt{5}$  m and  $x$ . The longest side is  $4\sqrt{5}$  m. What would  $x$  have to be for the triangle to be a right triangle? What is the perimeter of the triangle?

6. The longest side of a triangle has length  $(x + 4)$ . The other sides have lengths  $(x + 2)$  and 8. Find the value of  $x$  that would make the triangle a right triangle and give the length of each side.