

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

Score : \_\_\_\_\_

Teacher : \_\_\_\_\_

Date : \_\_\_\_\_

## Simplify the Radicals

1 )  $7\sqrt{27} =$

2 )  $\sqrt{180} =$

3 )  $\sqrt{100} =$

4 )  $\sqrt{49} =$

5 )  $6\sqrt{192} =$

6 )  $\sqrt{289} =$

7 )  $\sqrt{96} =$

8 )  $11\sqrt{605} =$

9 )  $12\sqrt{700} =$

10 )  $\sqrt{8} =$



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### Simplify the Radicals

$$1) \quad 7\sqrt{27} = 7\sqrt{9 \times 3} = 7 \times \sqrt{9} \times \sqrt{3} = 7 \times 3 \times \sqrt{3} = 21\sqrt{3}$$

$$2) \quad \sqrt{180} = \sqrt{36 \times 5} = \sqrt{36} \times \sqrt{5} = 6\sqrt{5}$$

$$3) \quad \sqrt{100} = 10$$

$$4) \quad \sqrt{49} = 7$$

$$5) \quad 6\sqrt{192} = 6\sqrt{64 \times 3} = 6 \times \sqrt{64} \times \sqrt{3} = 6 \times 8 \times \sqrt{3} = 48\sqrt{3}$$

$$6) \quad \sqrt{289} = 17$$

$$7) \quad \sqrt{96} = \sqrt{16 \times 6} = \sqrt{16} \times \sqrt{6} = 4\sqrt{6}$$

$$8) \quad 11\sqrt{605} = 11\sqrt{121 \times 5} = 11 \times \sqrt{121} \times \sqrt{5} = 11 \times 11 \times \sqrt{5} = 121\sqrt{5}$$

$$9) \quad 12\sqrt{700} = 12\sqrt{100 \times 7} = 12 \times \sqrt{100} \times \sqrt{7} = 12 \times 10 \times \sqrt{7} = 120\sqrt{7}$$

$$10) \quad \sqrt{8} = \sqrt{4 \times 2} = \sqrt{4} \times \sqrt{2} = 2\sqrt{2}$$

