

### Learning Goal 2.1 - Radicals Practice Test

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

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

- The sum of  $\sqrt{18}$  and  $6\sqrt{2}$  is
  - $7\sqrt{20}$
  - $9\sqrt{2}$
  - $15\sqrt{2}$
  - 18
- The sum of  $\sqrt{50}$  and  $\sqrt{18}$  is
  - $2\sqrt{17}$
  - $8\sqrt{2}$
  - $15\sqrt{2}$
  - 34
- The expression  $\sqrt{200}$  is equivalent to
  - $25\sqrt{8}$
  - $100\sqrt{2}$
  - $2\sqrt{10}$
  - $10\sqrt{2}$
- The expression  $\sqrt{50}$  is equivalent to
  - $5\sqrt{2}$
  - $25\sqrt{2}$
  - $2\sqrt{5}$
  - $5\sqrt{10}$
- The expression  $5\sqrt{3} - \sqrt{27}$  is equivalent to
  - $8\sqrt{3}$
  - $-8\sqrt{3}$
  - $-2\sqrt{3}$
  - $2\sqrt{3}$
- The sum of  $\sqrt{27}$  and  $6\sqrt{3}$  is
  - $7\sqrt{30}$
  - $9\sqrt{3}$
  - $9\sqrt{6}$
  - $15\sqrt{3}$
- Which is equivalent to  $\sqrt{40}$ ?
  - $2\sqrt{10}$
  - $2\sqrt{20}$
  - $4\sqrt{10}$
  - $10\sqrt{2}$
- The expression  $5\sqrt{8} - 3\sqrt{2}$  is equivalent to
  - 7
  - $7\sqrt{2}$
  - $2\sqrt{6}$
  - $\sqrt{34}$
- The expression  $\sqrt{93}$  is a number between
  - 3 and 9
  - 8 and 9
  - 9 and 10
  - 46 and 47
- When  $\sqrt{72}$  is expressed in simplest  $a\sqrt{b}$  form, what is the value of  $a$ ?
  - 6
  - 2
  - 3
  - 8

11. Expressed in simplest radical form, the product of  $\sqrt{6} \cdot \sqrt{15}$  is

- A.  $\sqrt{90}$                       B.  $9\sqrt{10}$   
C.  $3\sqrt{10}$                       D.  $3\sqrt{15}$

12. Which expression is equivalent to  $7\sqrt{90}$  ?

- A.  $16\sqrt{10}$                       B.  $21\sqrt{10}$   
C.  $70\sqrt{9}$                       D.  $\sqrt{630}$

13. What is  $2\sqrt{45}$  expressed in simplest radical form?

- A.  $3\sqrt{5}$                       B.  $5\sqrt{5}$   
C.  $6\sqrt{5}$                       D.  $18\sqrt{5}$

14. Which represents an irrational number?

- A. 0                      B.  $\frac{3}{4}$                       C.  $\sqrt{3}$                       D.  $\sqrt{4}$

15. Which does not represent a rational number?

- A.  $\frac{3}{2}$                       B.  $\sqrt{7}$                       C.  $\sqrt{16}$                       D.  $0.\overline{29}$

16. Which is a rational number?

- A.  $\sqrt{7}$                       B.  $\sqrt{18}$                       C.  $\sqrt{49}$                       D.  $\sqrt{20}$

17. Express  $\sqrt{25} - 2\sqrt{3} + \sqrt{27} + 2\sqrt{9}$  in the simplest radical form.