

## Unit 1 Test #2

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

**Simplify.**

1)  $-2\sqrt{5} - 2\sqrt{20} - 2\sqrt{18}$

2)  $-2\sqrt{27} - 3\sqrt{5} - \sqrt{5}$

3)  $2\sqrt{5} - 3\sqrt{5}$

4)  $-2\sqrt{6} - 2\sqrt{6}$

5)  $3\sqrt{8} + 2\sqrt{8}$

6)  $3\sqrt{54} - 2\sqrt{54}$

7)  $\sqrt{252}$

8)  $\sqrt{384}$

9)  $\sqrt{448}$

10)  $-3\sqrt{147}$

11)  $4\sqrt{384}$

12)  $-5\sqrt{392n^3}$

13)  $2\sqrt{180p^2}$

14)  $-7\sqrt{8x^3y^4}$

15)  $6\sqrt{48u^2v^4}$

16)  $-8\sqrt{216a^2b^4c^4}$

17)  $\sqrt{5} \cdot \sqrt{20}$

18)  $5\sqrt{15} \cdot -4\sqrt{10}$

19)  $-2\sqrt{8} \cdot \sqrt{2}$

20)  $-3\sqrt{10b^2} \cdot \sqrt{2b^2}$

21)  $\sqrt{8n^2} \cdot \sqrt{8n}$

22)  $\sqrt{2}(2v^3 + \sqrt{2})$

23)  $\sqrt{2n}(4 + \sqrt{5n})$

24) Give two examples of a rational number

25) Give two examples of an irrational number

26) Give an example of a number that is considered rational, a whole number, an integer and a natural number

## Unit 1 Test #2

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

**Simplify.**

$$1) -2\sqrt{5} - 2\sqrt{20} - 2\sqrt{18}$$
$$-6\sqrt{5} - 6\sqrt{2}$$

$$2) -2\sqrt{27} - 3\sqrt{5} - \sqrt{5}$$
$$-6\sqrt{3} - 4\sqrt{5}$$

$$3) 2\sqrt{5} - 3\sqrt{5}$$
$$-\sqrt{5}$$

$$4) -2\sqrt{6} - 2\sqrt{6}$$
$$-4\sqrt{6}$$

$$5) 3\sqrt{8} + 2\sqrt{8}$$
$$10\sqrt{2}$$

$$6) 3\sqrt{54} - 2\sqrt{54}$$
$$3\sqrt{6}$$

$$7) \sqrt{252}$$
$$6\sqrt{7}$$

$$8) \sqrt{384}$$
$$8\sqrt{6}$$

$$9) \sqrt{448}$$
$$8\sqrt{7}$$

$$10) -3\sqrt{147}$$
$$-21\sqrt{3}$$

$$11) 4\sqrt{384}$$
$$32\sqrt{6}$$

$$12) -5\sqrt{392n^3}$$
$$-70n\sqrt{2n}$$

$$13) 2\sqrt{180p^2}$$
$$12p\sqrt{5}$$

$$14) -7\sqrt{8x^3y^4}$$
$$-14y^2x\sqrt{2x}$$

$$15) 6\sqrt{48u^2v^4}$$
$$24v^2u\sqrt{3}$$

$$16) -8\sqrt{216a^2b^4c^4}$$
$$-48b^2c^2a\sqrt{6}$$

$$17) \sqrt{5} \cdot \sqrt{20}$$
$$10$$

$$18) 5\sqrt{15} \cdot -4\sqrt{10}$$
$$-100\sqrt{6}$$

$$19) -2\sqrt{8} \cdot \sqrt{2}$$
$$-8$$

$$20) -3\sqrt{10b^2} \cdot \sqrt{2b^2}$$
$$-6b^2\sqrt{5}$$

$$21) \sqrt{8n^2} \cdot \sqrt{8n}$$
$$8n\sqrt{n}$$

$$22) \sqrt{2}(2v^3 + \sqrt{2})$$
$$2v^3\sqrt{2} + 2$$

$$23) \sqrt{2n}(4 + \sqrt{5n})$$
$$4\sqrt{2n} + n\sqrt{10}$$

24) Give two examples of a rational number

25) Give two examples of an irrational number

26) Give an example of a number that is considered rational, a whole number, an integer and a natural number