Name _____ Class _____ Date _____

Chapter 10 Quiz 2

Form K

Lesson 10-2 through 10-3

Do you know HOW?

Simplify each expression.

1. $\sqrt{441}$

2. $-11\sqrt{112}$

3. $\sqrt{8}\cdot\sqrt{18}$

4. $3\sqrt{27}\cdot 5\sqrt{32}$

5. $\sqrt{\frac{49}{64}}$

6. $\frac{2}{\sqrt{5}}$

7. $17\sqrt{17}-9\sqrt{17}$

8. $12\sqrt{6}-\sqrt{24}$

9. $4\sqrt{5}(\sqrt{5}-3\sqrt{15})$

10. [illegible]

11. A playground is shaped like a rectangle with a width 5 times its length l. What is a simplified expression for the distance between opposite corners of the playground?

Do you UNDERSTAND?

13. **Writing** How do you know when a radical is in simplified form?

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Chapter 10 Quiz 2

Form K

Lesson 10-2 through 10-3

Do you know HOW?

Simplify each expression.

1. $\sqrt{441}$ **21**

2. $-11\sqrt{112}$ **$-44\sqrt{7}$**

3. $\sqrt{8} \cdot \sqrt{18}$ **12**

4. $3\sqrt{27} \cdot 5\sqrt{32}$ **$180\sqrt{6}$**

5. $\sqrt{\frac{49}{64}}$ **$\frac{7}{8}$**

6. $\frac{2}{\sqrt{5}}$ **$\frac{2\sqrt{5}}{5}$**

7. $17\sqrt{17} - 9\sqrt{17}$ **$8\sqrt{17}$**

8. $12\sqrt{6} - \sqrt{24}$ **$10\sqrt{6}$**

9. $4\sqrt{5}(\sqrt{5} - 3\sqrt{15})$ **$20 - 60\sqrt{3}$**

10. $\frac{6}{\sqrt{3}}$ **$2\sqrt{3}$**

11. A playground is shaped like a rectangle with a width 5 times its length l. What is a simplified expression for the distance between opposite corners of the playground?
$l\sqrt{26}$

12. A tabletop is shaped like a golden rectangle. Its length is 5 ft. What is the table's width? Write your answer in simplified radical form and rounded to the nearest tenth.
$\frac{-5 + 5\sqrt{5}}{2}$; 3.1 ft

Do you UNDERSTAND?

13. **Open-Ended** Write an expression involving radicals in which you must use a conjugate to simplify. Simplify your expression.
Answers may vary. Sample: $\frac{1}{1 - \sqrt{2}} = -1 - \sqrt{2}$

14. **Writing** How do you know when a radical is in simplified form?
None of the factors left in the radicand are perfect squares.