Homework

Unit 11: Radicals and Sequences   Name: _____ **Key**
Simplifying&Estimating Practice- Day 2   Date: _____ Period: __

Front Only!

Determine between which two whole numbers does each of the following radicals falls:

1. $\sqrt{91}$ 9 + 10

2. $\sqrt{83}$ 9 + 10

3. $\sqrt{115}$ 10 + 11

4. $\sqrt{200}$ 14 + 15

5. $\sqrt{450}$ 21 + 22

Simplify the following radicals:

6. $2 \cdot 2\sqrt{24} = 4\sqrt{6}$

7. $3 \cdot 5\sqrt{45} = 15\sqrt{5}$

8. $17 \cdot 2\sqrt{289} = 34$

9. $5 \cdot 4\sqrt{50} = 20\sqrt{2}$

10. $4 \cdot 3\sqrt{32} = 12\sqrt{2}$

Simplify the following radicals to have a rational denominator:

11. $\dfrac{4}{\sqrt{5}}\left(\dfrac{\sqrt{5}}{\sqrt{5}}\right) = \dfrac{4\sqrt{5}}{5}$

12. $\dfrac{2}{\sqrt{16}} = \dfrac{2}{4} = \dfrac{1}{2}$

13. $\dfrac{5}{\sqrt{10}}\left(\dfrac{\sqrt{10}}{\sqrt{10}}\right) = \dfrac{5\sqrt{10}}{10} = \dfrac{\sqrt{10}}{2}$

14. $\dfrac{3}{\sqrt{7}}\left(\dfrac{\sqrt{7}}{\sqrt{7}}\right) = \dfrac{3\sqrt{7}}{7}$

15. $\dfrac{2}{\sqrt{8}} = \dfrac{2}{2\sqrt{2}} = \dfrac{1}{\sqrt{2}}\left(\dfrac{\sqrt{2}}{\sqrt{2}}\right) = \dfrac{\sqrt{2}}{2}$