Unit 2 Study guide 2 Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Estimate $\sqrt{32}$ and place on a number line.

 0 1 2 3 4 5 6 7

2. What’s the difference between rational and irrational numbers? Give an example of each. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. Simplify $\left(\frac{5x^{3}y^{5}}{10x^{2}y^{7}}\right)^{-3}$ 4. Simplify $\left(7x^{-3}y^{7}\right)^{2}$

5. $\left(3xy\right)\left(7x^{2}y^{4}\right)$

6. $\left(7×10^{3}\right)\left(2×10^{4}\right)$ 7. $\left(8×10^{4}\right)÷\left(4×10^{3}\right)$

8. Solve $2\left(x-3\right)+7=5x-2$

9. Solve $\frac{3}{4}\left(x+1\right)=\frac{1}{2}(2x+7)$

10. $\sqrt{81}$ 11. $\sqrt[3]{125}$ 12. $\sqrt{64}$

13. If the volume of a cube is 27$cm^{3}$. Determine the length of a side of that cube.

14. Ivan can rent a car for $20 and $.30 per mile from AAA car rental, or he could rent a car from PRO car rental for $25 and $.10 per mile. How many miles would he drive to spend a equal amount of money at both places.