**Unit 1 Review Sheet**

**Section 1: Fraction to Decimal**

**Convert each fraction into a decimal. Show all work.**

1) $\frac{23}{4}$                              2) $\frac{11}{12}$                              3) $\frac{1}{7}$

**Section 2: Decimal to Fraction**

**Convert each decimal into a fraction. Simplify if possible.**

4) 4.1                5) $4.\overline{1}$                6) 4.12                7) $4.\overline{12}$                8) $4.\overline{123456}$

**Section 3: Exact Roots**

**Find each root. Show your work for each one. (Don't erase your "guesses" that don't work!)**

9) $\sqrt{400}$                10) $\sqrt[3]{-216}$                11) $\sqrt{\frac{81}{64}}$                12) $\sqrt{-324}$                13) $\sqrt[4]{81}$

**Section 4: Estimating Roots**

**For 14 – 16, all answers in a reasonable range will be accepted.**

14) $\sqrt{40}$                              15) $\sqrt{117}$                              16) $\sqrt[3]{32}$

**For 17 and 18, you <u>must be accurate to the nearest tenth.</u> Multiply out your estimates to see which is the closest.**

17) $\sqrt{34}$                              18) $\sqrt{102}$

### Section 5: Solving equations with exponents
**Solve each equation. (That means find all possible solutions!)**

19) $x^3 = 125$  20) $x^2 = -4$  21) $x^3 = -1000$  22) $x^2 = 121$

### Section 6: Rational or Irrational
**For each problem, state whether it is rational or irrational, and explain why.**

23) $0.\overline{81}$  24) $\sqrt{14}$  25) $1.7865$

26) $\dfrac{18}{17}$  27) $\sqrt[3]{\dfrac{16}{2}}$  28) $1.405060708\ldots$

### Section 7: Comparing Values
29) Put these values in order from least to greatest. Then explain, in words, how you put them in order. You must mention each of the six values in your explanation.

**A:** $\dfrac{17}{4}$  **B:** $3.3$  **C:** $\sqrt{23}$  **D:** $3\dfrac{1}{3}$  **E:** $\sqrt[3]{20}$  **F:** $2\pi$

____, ____, ____, ____, ____, ____

***Now, go to lischwe.weebly.com and use the answer key to check your answers <u>in a different color</u>! If you use that different color to rework the problems and fix your mistakes, you will get to count it as correct when we score the assignment. This is part of the grade – you will not be able to get a 100% if you don't do this!***