PC11 Types of Numbers Lesson

1. Provide the mathematical symbol and examples of the following types of numbers:
   a. Natural

   b. Whole

   c. Integers

   d. Rational

   e. Real

   f. Enrichment: What is a complex number??

2. Rational or irrational?
   a. $\sqrt{5}$

   b. $\sqrt{16}$

   c. $\sqrt{\frac{25}{9}}$

d. π

e. 0

f. $1.\overline{6}$

g. 0.02

h. 2.5

i. $\sqrt{1.21}$

j. $e \approx 2.718$

3. Rank from least to greatest: $2.5, \sqrt{9}, -100, \frac{8}{3}, 3.\overline{3}, \infty, 200\%$

4. Sketch $y = 2 - x, x > 3$

5. Sketch $y = \frac{2}{3}x - 1, x \leq 2$

6. Sketch $y = 2x + 3,\ x \in \mathbb{Z}^+$ (positive integer)

7. List the four prime numbers

8. List the first four positive perfect squares

9. List the first four positive perfect cubes

10. Show that $0.\overline{7}$ is rational

11. 1, 4, 9, 16, 25 ... What is the value of the nth term?

12. $0.\overline{k} = \frac{a}{b}$. Find a and b

13. Show that $1.\overline{23}$ is a rational number

14. Show that $2.0\overline{51}$ is a rational number