So far we have identified the following sets of numbers…

**Whole numbers**

\[ W = \{ 0, 1, 2, 3, 4 \ldots \} \]

**Integers**

\[ I = \{ \ldots -3, -2, -1, 0, 1, 2, 3 \ldots \} \]

**Fractions**

\[ F = \left\{ \frac{a}{b} \text{ where } a \text{ and } b \text{ are integers and } b \neq 0 \right\} \]

**Terminating Decimals**

\[ T \]

**Repeating Decimals**

\[ R \]

Decide which set (or sets) each of the following values are elements of:

1. \[ 0 \]
2. \[ \frac{1}{2} \]
3. \[ \frac{1}{3} \]
4. \[ 1 \]
5. \[ -10 \]
6. \[ 10 \]
7. \[ -\frac{1}{4} \]
8. \[ -3 \]
9. \[ 0.1234567 \]
10. \[ 8 \]
To help us make a Venn Diagram of the relationships above, we need to answer the following questions

1. What is the smallest set? ........................................

2. What is the largest set? ........................................

3. What is the universal set? ....................................

4. Which sets do not intersect? ................................

5. True or false…
   All Whole numbers are fractions  ____
   All Whole numbers are integers  ____
   All Integers are fractions  ____
   A fraction is a terminating decimal  ____

6. Make the Venn Diagram for the sets $W, I, F, T$ and $R$