Comparing Real Numbers Worksheet Answer Key

Usurper!

Fill in the blanks with $<$, $>$, or $=$.

1. $\frac{2}{3}$ $<$ $\frac{7}{8}$

   $\frac{2}{3} = \frac{16}{24} < \frac{21}{24} = \frac{7}{8}$

2. 45 $>$ $8\frac{1}{12}$

   $8\frac{1}{12} = 8 + \frac{1}{12} < 45$

3. $\frac{17}{5}$ $=$ $3\frac{2}{5}$

   $3\frac{2}{5} = 3 + \frac{2}{5} = \frac{17}{5}$

4. $-\frac{4}{3} > -2$

   $-\frac{4}{3} = -1.33 > -2$

5. $\frac{2}{\sqrt{2}} = \sqrt{2}$

   $\frac{2}{\sqrt{2}} = \frac{2\sqrt{2}}{\sqrt{2}\sqrt{2}} = \frac{2\sqrt{2}}{2} = \sqrt{2}$

6. $3\frac{1}{4}$ $>$ $2\frac{3}{4}$

   $3\frac{1}{4} = 3 + \frac{1}{4} = \frac{13}{4}$ and $2\frac{3}{4} = 2 + \frac{3}{4} = \frac{11}{4}$

7. $0.25 > \frac{3}{15}$

   $\frac{3}{15} = \frac{1}{5} = 0.2 < 0.25$

8. $-2\frac{1}{3} < -1$

   $-2\frac{1}{3} = -\frac{7}{3} = -2.33 < -1$

9. $\frac{19.8}{2} < 10$

   $\frac{19.8}{2} = 9.9 < 10$

10. $x > x^2$ where x is a real number and $0 < x < 1$.

    Since $0 < x < 1$, x is a proper fraction. Also, $\frac{x^2}{x} = x < 1$, implies $x^2 < x$.