

## 9.6 Compare and Order Rational Numbers

You can use a number line to compare and order rational numbers.

A number is always greater than a number to its left.

A positive number is always greater than a negative number.

**Example:** Choose the greater number.

1.)  $4.25$ ,  $-7.1$

2.)  $-5.5$ ,  $-6.5$

3.)  $0$ ,  $-0.5$

4.)  $-3.0$ ,  $-3.5$

5.)  $-4.3$ ,  $-4.2$

6.)  $-0.8$ ,  $-0.9$

7.)  $2$ ,  $0.5$

8.)  $5.4$ ,  $0$

9.)  $0.25$ ,  $0.75$

10.)  $\frac{1}{2}$ ,  $\frac{3}{2}$

11.)  $-2$ ,  $-0.5$

12.)  $\frac{2}{10}$ ,  $\frac{10}{20}$

$\frac{2}{1}$   $\frac{1}{2}$

**Example:** Arrange in order from greatest to least.

13.) 3.5, 2.5, 3.75     3.75, 3.5, 2.5

14.)  $-1.25$ ,  $-\frac{1}{2}$ ,  $-\frac{2}{2}$       $-0.5$ ,  $-1$ ,  $-1.25$   
 $0.5$       $-1$

15.)  $\frac{9}{2}$ , 5, 6.25     6.25, 5, 4.5  
 $4\frac{1}{2} = 4.5$

16.) 0, -5.75, -5.25     0, -5.25, -5.75

**Example:** Compare. Write  $<$ ,  $=$ , or  $>$ .

17.)  $0.5$   $>$   $-\frac{1}{2}$

18.)  $\frac{3}{4}$   $<$   $2$   
 $0.75$

19.)  $-2.1$   $>$   $-3.6$

20.)  $-1$   $>$   $-1.1$

21.)  $0$   $=$   $-(0)$   
 $0$

22.)  $2$   $=$   $\left(\frac{4}{2}\right) = \frac{2}{1} = 2$

23.)  $-\frac{3}{8}$   $>$   $-2$

24.)  $-0.25$   $=$   $-\frac{1}{4}$   
 $-0.25$

$$\begin{array}{r} .375 \\ 8 \overline{) 3.000} \\ \underline{24} \phantom{00} \\ 60 \phantom{0} \\ \underline{56} \phantom{0} \\ 40 \\ \underline{40} \\ 0 \end{array}$$