

## Technology Activity

(Use with Lesson 2-4)

## Comparing and Ordering Fractions

You can use the TEST menu on a TI-82/83 to determine whether one fraction is less than, greater than, or equal to another.

## Example

Replace the    ? in  $\frac{6}{7}$     ?  $\frac{7}{8}$  with  $<$ ,  $>$ , or  $=$  to make the sentence true.

Enter: 6  $\div$  7

$\boxed{2\text{nd}}$   $\boxed{\text{TEST}}$  3

7  $\div$  8  $\boxed{\text{ENTER}}$  0

Enter the first expression.

We will guess that  $>$  makes the sentence true.

A result of 0 indicates that our guess was wrong; a result of 1 would indicate that our guess was right.

Trying  $<$  shows that it makes the sentence true. Thus,  $\frac{6}{7} < \frac{7}{8}$ .

Replace each    ? with  $<$ ,  $>$ , or  $=$  to make each sentence true.

1.  $\frac{8}{7}$     ?  $\frac{9}{8}$   $>$

2.  $\frac{9}{10}$     ?  $\frac{10}{11}$   $<$

3.  $\frac{7}{19}$     ?  $\frac{6}{17}$   $>$

4. Use a graphing calculator to write  $\frac{17}{21}$ ,  $\frac{20}{27}$ ,  $\frac{19}{24}$  in order from least to greatest.

$\frac{20}{27}$ ,  $\frac{19}{24}$ ,  $\frac{17}{21}$

5. You can use a less tedious method to order the set of fractions below from least to greatest.

$\frac{3}{4}$ ,  $\frac{5}{8}$ ,  $\frac{2}{5}$ ,  $\frac{4}{5}$ ,  $\frac{4}{9}$ ,  $\frac{3}{8}$ ,  $\frac{6}{7}$

First, clear all lists. Press  $\boxed{\text{STAT}}$  1 and enter the fractions into L1. Then press

$\boxed{\text{STAT}}$  2  $\boxed{2\text{nd}}$  L1  $\boxed{\text{ENTER}}$ . To view the sorted data as fractions, press  $\boxed{2\text{nd}}$  L1  $\boxed{\text{MATH}}$

1  $\boxed{\text{ENTER}}$ . Use the arrow keys to scroll through the list. Write the fractions in the correct order below.

$\frac{3}{8}$ ,  $\frac{2}{5}$ ,  $\frac{4}{9}$ ,  $\frac{5}{8}$ ,  $\frac{3}{4}$ ,  $\frac{4}{5}$ ,  $\frac{6}{7}$

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

6. Create a list of at least seven fractions to sort from *greatest to least*. Exchange your list with a partner and sort each other's lists. **See students' work.**