

# 5.2

## Ordering Fractions

### • Example 1

Suppose  $a, b, c,$  and  $d$  are four positive numbers which satisfy the conditions  $a < b < c < d.$

Fill in the blank boxes using either  $>, <, \text{ or } =,$  so as to make each of the following a true statement.

$$\frac{a}{b} \square \frac{a}{c}$$

$$\frac{a}{d} \square \frac{c}{b}$$

Using the order properties of the real line, we have

$$\frac{a}{b} > \frac{a}{c}, \text{ since } b < c$$

$$\frac{a}{d} < \frac{c}{b}, \text{ since } a < d \text{ and } b < c \text{ and so } \frac{a}{d} < 1 < \frac{c}{b}.$$

### • • • CHECK YOURSELF 1

If  $a, b, c,$  and  $d$  are as above, fill in the blank box with either  $<, >, =$  so as to make the statement true.

$$\frac{a}{b} \square \frac{b}{a}$$

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### • • • CHECK YOURSELF ANSWER

1.  $\frac{a}{b} < \frac{b}{a}.$

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# 5.2 Exercises

Name \_\_\_\_\_

Section \_\_\_\_\_

Date \_\_\_\_\_

## A N S W E R S

1. \_\_\_\_\_

Suppose  $a$ ,  $b$ ,  $c$ , and  $d$  are four positive numbers which satisfy the conditions

$$a < b < c < d.$$

2. \_\_\_\_\_

Fill in the blank boxes using either  $>$ ,  $<$ , or  $=$ , so as to make each of the following a true statement.

3. \_\_\_\_\_

1.  $\frac{a}{b} \square \frac{d}{c}$

2.  $\frac{c}{b} \square \frac{d}{a}$

4. \_\_\_\_\_

5. \_\_\_\_\_

6. \_\_\_\_\_

3.  $\frac{b}{a} \square \frac{a}{c}$

4.  $\frac{b}{b} \square \frac{c}{b}$

5.  $\frac{c}{a} \square \frac{a}{d}$

6.  $\frac{a}{a} \square \frac{d}{d}$