

# 2.1 Lesson

To add rational numbers, use the same rules you used for adding integers.

## Key Ideas

### Adding Rational Numbers with the Same Sign

**Words** Add the absolute values of the rational numbers. Then use the common sign.

**Numbers**  $3 + 6 = 9$        $-3 + (-6) = -9$

### Adding Rational Numbers with Different Signs

**Words** Subtract the lesser absolute value from the greater absolute value. Then use the sign of the rational number with the greater absolute value.

**Numbers**  $4 + (-5) = -1$        $-9 + 19 = 10$

## Example 1 Adding Rational Numbers

**1 MTR HELP A CLASSMATE**  
 Help a classmate understand why integers are rational numbers.

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a. Find  $-12 + (-7)$ .

$-12 + (-7) = -19$       Add  $|-12|$  and  $|-7|$ .  
 Use the common sign.

▶ The sum is  $-19$ .

b. Find  $-21 + 5$ .

$-21 + 5 = -16$        $|-21| > |5|$ . So, subtract  $|5|$  from  $|-21|$ .  
 Use the sign of  $-21$ .

▶ The sum is  $-16$ .

c. Find  $4 + (-4)$ .

$4 + (-4) = 0$       The sum is 0 by the Additive Inverse Property.  
 4 and  $-4$  are opposites.

▶ The sum is 0.

### Try It

Find the sum.

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1.  $-9 + 5$

$-4$

2.  $-4 + (-8)$

$-12$

3.  $-24 + 24$

$0$

