## Lesson 4: The Relationship of Division and Subtraction

## Classwork

## Exercise 1

Build subtraction equations using the indicated equations. The first example has been completed for you.

| Division <br> Equation | Divisor Indicates the <br> Size of the Unit |  | Tape Diagram |  |
| :---: | :---: | :---: | :---: | :---: |
| $12 \div x=4$ | $12-x-x-x-x=0$ |  |  | What is <br> $\boldsymbol{x}, \boldsymbol{y}, \boldsymbol{z} \boldsymbol{?}$ |
| $18 \div x=3$ |  |  | $x=3$ |  |
| $35 \div y=5$ |  |  |  |  |
| $42 \div z=6$ |  |  |  |  |


| Division <br> Equation | Divisor Indicates the <br> Number of Units |  | Tape Diagram |  | What is <br> $\boldsymbol{x}, \boldsymbol{y}, \boldsymbol{z} \boldsymbol{?}$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| $12 \div x=4$ | $12-4-4-4=0$ |  |  | $x=3$ |  |
| $18 \div x=3$ |  |  |  |  |  |
| $35 \div y=5$ |  |  |  |  |  |
| $42 \div z=6$ |  |  |  |  |  |

## Exercise 2

Answer each question using what you have learned about the relationship of division and subtraction.
a. If $12 \div x=3$, how many times would $x$ have to be subtracted from 12 in order for the answer to be zero? What is the value of $x$ ?
b. $36-f-f-f-f=0$. Write a division sentence for this repeated subtraction sentence. What is the value of $f$ ?
c. If $24 \div b=12$, which number is being subtracted 12 times in order for the answer to be zero?

## Problem Set

Build subtraction equations using the indicated equations.

|  | Division <br> Equation | Divisor Indicates the Size <br> of the Unit | Tape Diagram | What is <br> $x, y, z$ |
| :--- | :--- | :--- | :--- | :--- |
| 1. | $24 \div x=4$ |  |  |  |
| 2. | $36 \div x=6$ |  |  |  |
| 3. | $28 \div y=7$ |  |  |  |
| 4. | $30 \div y=5$ |  |  |  |
| 5. | $16 \div z=4$ |  |  |  |


|  | Division <br> Equation | Divisor Indicates the <br> Number of Units | Tape Diagram | What is <br> $\boldsymbol{x}, \boldsymbol{y}, \boldsymbol{z} \boldsymbol{?}$ |
| :--- | :--- | :--- | :--- | :--- |
| 1. | $24 \div x=4$ |  |  |  |
| 2. | $36 \div x=6$ |  |  |  |
| 3. | $28 \div y=7$ |  |  |  |
| 4. | $30 \div y=5$ |  |  |  |
| 5. | $16 \div z=4$ |  |  |  |

