

Name _____

Date _____

The Relationship of Division and Subtraction

1. Represent $56 \div 8 = 7$ using subtraction. Explain your reasoning.

2. Explain why $30 \div x = 6$ is the same as $30 - x - x - x - x - x - x = 0$. What is the value of x in this example?

Build subtraction equations using the indicated equations.

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

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1. Represent $56 \div 8 = 7$ using subtraction. Explain your reasoning.

$$56 - 7 - 7 - 7 - 7 - 7 - 7 - 7 - 7 = 0 \text{ because}$$

$$56 - 7 = 49; 49 - 7 = 42; 42 - 7 = 35; 35 - 7 = 28; 28 - 7 = 21; 21 - 7 = 14; 14 - 7 = 7; 7 - 7 = 0.$$

OR

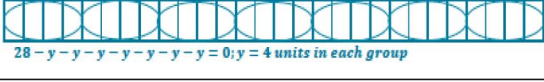
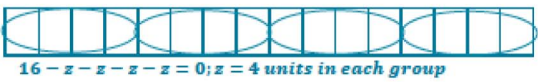
$$56 - 8 - 8 - 8 - 8 - 8 - 8 - 8 = 0 \text{ because}$$

$$56 - 8 = 48; 48 - 8 = 40; 40 - 8 = 32; 32 - 8 = 24; 24 - 8 = 16; 16 - 8 = 8; 8 - 8 = 0.$$

2. Explain why $30 \div x = 6$ is the same as $30 - x - x - x - x - x - x = 0$. What is the value of x in this example?

$30 \div 5 = 6$, so $x = 5$. When I subtract 5 from 30 six times, the result is zero. Division is a repeat operation of subtraction.

Build subtraction equations using the indicated equations.

	Division Equation	Divisor Indicates the Size of the Unit	Tape Diagram	What is x, y, z ?
1.	$24 \div x = 4$	$24 - x - x - x - x = 0$		$x = 6$
2.	$36 \div x = 6$	$36 - x - x - x - x - x - x = 0$		$x = 6$
3.	$28 \div y = 7$	$28 - y - y - y - y - y - y - y = 0$		$y = 4$
4.	$30 \div y = 5$	$30 - y - y - y - y - y = 0$		$y = 6$
5.	$16 \div z = 4$	$16 - z - z - z - z = 0$		$z = 4$

	Division Equation	Divisor Indicates the Number of Units	Tape Diagram	What is x, y, z ?
1.	$24 \div x = 4$	$24 - 4 - 4 - 4 - 4 - 4 - 4 = 0$	 $24 - 4 - 4 - 4 - 4 - 4 - 4 = 0; x = 6 \text{ groups}$	$x = 6$
2.	$36 \div x = 6$	$36 - 6 - 6 - 6 - 6 - 6 - 6 = 0$	 $36 - 6 - 6 - 6 - 6 - 6 - 6 = 0; x = 6 \text{ groups}$	$x = 6$
3.	$28 \div y = 7$	$28 - 7 - 7 - 7 - 7 = 0$	 $28 - 7 - 7 - 7 - 7 = 0; y = 4 \text{ groups}$	$y = 4$
4.	$30 \div y = 5$	$30 - 5 - 5 - 5 - 5 - 5 - 5 = 0$	 $30 - 5 - 5 - 5 - 5 - 5 - 5 = 0; y = 6 \text{ groups}$	$y = 6$
5.	$16 \div z = 4$	$16 - 4 - 4 - 4 - 4 = 0$	 $16 - 4 - 4 - 4 - 4 = 0; z = 4 \text{ groups}$	$z = 4$