TOPIC: DIVIDING WHOLE NUMBERS

Solving Division Problems

◆ Division can be understood as _____ and _____.

► Division can be represented by different notations: $8 \div 2$

New **Division**

I have 8 cookies and want to **split** them equally among 2 friends. *How many cookies* will each friend get?

I have 8 cookies and want to **give** each friend 2 cookies. *How many friends* will get cookies?

$8 \div 2 = \_\_$

EXAMPLE Find the quotient.

(***A***) $12 \div 3$

(***B***) $\frac{32}{4}$

◆ We can also solve division problems by rewriting them as _____ problems.

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PRACTICE Identify the divisor, dividend, and quotient for each problem below.

(**A**) $\frac{32}{2} = 16$

(**B**) $30 \div 10 = 3$

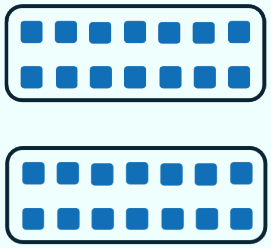
(**C**) $5\overline{)45}$

PRACTICE Find the quotient.

(**A**) $36 \div 3$

(**B**) $\frac{54}{6}$

EXAMPLE Write an expression that represents the quotient below.



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Properties of Division

Name	Description	Example	Rule
1 Properties	Any non-zero number **divided by itself** is ____.	$5 \div 5$	$a \div a = 1$
	Any number **divided by 1** is that _____ number.	$5 \div 1$	$a \div 1 = a$
0 Properties	**Zero** divided by any number is ____.	$0 \div 5$	$0 \div a = 0$
	Any number **divided by zero** is _____.	$5 \div 0$	$a \div 0$ *is* undefined

EXAMPLE Find the quotient.

$(\boldsymbol{A})$ $\dfrac{32}{0}$

$(\boldsymbol{B})$ $0 \div 10$

$(\boldsymbol{C})$ $3\overline{)3}$

PRACTICE Find the quotient.

$(\boldsymbol{A})$ $0 \div 7$

$(\boldsymbol{B})$ $\dfrac{26}{0}$

$(\boldsymbol{C})$ $1\overline{)54}$