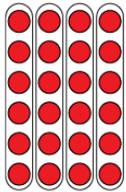


# Activity 29 Assessment

## Fluency with Multiplication and Division Facts Consolidation

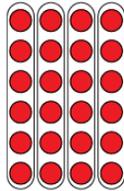
### Fluency of Multiplication and Division Facts

Recalls and demonstrates multiplication and divisions facts to  $5 \times 5$ .



"I know that  $4 \times 6 = 24$   
and that  $24 \div 6 = 4$ .  
The array shows both facts."

Uses inverse operations to solve multiplication and division problems.



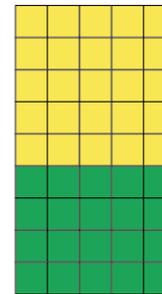
"I can rewrite  $24 \div 6 = ?$   
as  $6 \times ? = 24$ ."

Uses known facts to determine unknown facts

"I can use the distributive property to split the multiplication into facts that I know, then add."

$$5 \times 9 = \underline{5 \times 5} + \underline{5 \times 4}$$

$$25 + 20 = 45$$



Fluently creates and solves whole number multiplication and division problems.

There are 56 basketballs with the same number on each of 8 shelves.

$$8 \times \square = 56, \text{ so } 56 \div 8 = \square$$

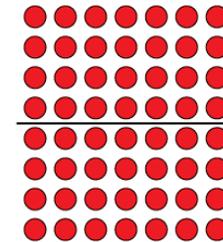
$$8 \times 7 = 56$$

Or

$$8 \times 7 = 4 \times 7 + 4 \times 7$$

$$= 28 + 28$$

$$= 56$$



### Observations/Documentation

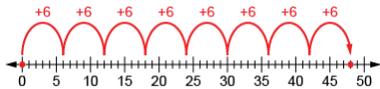
# Activity 29 Assessment

## Fluency with Multiplication and Division Facts Consolidation

### Representing Multiplicative Relationships as Rates

Solves unit rate problems concretely and pictorially

It takes 6 apples to make an apple pie. How many apples are needed to make 9 pies?



"I used a number line to show how the number of apples increases as the number of pies increases."

Uses various tools to solve multiple unit rate problems.

Kiran and Simi walk 30 km. Kiran walks 5 km per hour and Simi walks 6 km in one hour. How long will it take each person to walk 30 km?

Hours	1	2	3	4	5	6
Kiran (km)	5	10	15	20	25	30
Sami (km)	6	12	18	24	30	?

"I used a ratio table. It makes it easy to make comparisons and to solve the problem."

Uses inverse relationships to record and solve unit rate problems

Marc paddled a canoe 10 km in 150 minutes. At what rate did he paddle?

Minutes	150	15
Marc (km)	10	1

$\div 10$   
 $\div 10$

"10 km  $\times$  rate per minute = 150 minutes  
 I thought division:  $150 \div 10 = ?$   
 I know  $10 \times 15 = 150$ .  
 So, Marc paddled at the rate of 15 km per minute."

Flexibly applies multiplicative reasoning to solve different types of unit rate problems.

Shila cuts lawns in the neighborhood and charges \$7/hour. If Shila works for 6 hours each week, how many hours will Shila need to work to make \$168?

Hours	6	12	18	24
Earnings (\$)	42	84	126	168

"I know that Shila makes \$42 a week ( $7 \times 6 = 42$ ). From the ratio table, Shila will make \$168 dollars after 24 hours of work."

### Observations/Documentation