## 10-2 Exploring Equivalent Ratios

CCSS: 6.RP.A.3: Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by

## Launch

A website sells song downloads for $\$ 2$ each and movie downloads for $\$ 5$ each. Your friend buys the same number of movies as songs. If he spends $\$ 20$ on movies, how much does he spend on songs?

Use the multiplication table to show the solution.

| $x$ | 1 | 2 | 3 | 4 | 5 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 |  |  |  |  |  |
| 2 |  |  |  |  |  |
| 3 |  |  |  |  |  |
| 4 |  |  |  |  |  |
| 5 |  |  |  |  |  |

My friend buys $\square$ songs and $\square$ movies. My friend spends $\square$ on songs and $\square$ on movies.

Reflect Do you need to complete the whole multiplication table to solve the problem? Explain.
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$\qquad$

## Got lt?

## PART 1 Got lt

Use the multiplication table to find ratios equivalent to
$24: 28$. Find one ratio with lower terms and one ratio with greater terms.

| $x$ | 5 | 6 | 7 | 8 |
| :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1}$ | 5 | 6 | 7 | 8 |
| $\mathbf{2}$ | 10 | 12 | 14 | 16 |
| $\mathbf{3}$ | 15 | 18 | 21 | 24 |
| $\mathbf{4}$ | 20 | 24 | 28 | 32 |
| 5 | 25 | 30 | 35 | 40 |
| 6 | 30 | 36 | 42 | 48 |
| 7 | 35 | 42 | 49 | 56 |
| 8 | 40 | 48 | 56 | 64 |

## PART 2 Got lt

Complete the equivalent ratio.
$\square$ $: 28=18: 36$

## Got It?

## PART 3 Got lt

In the same class of 32 students, 1 of every 4 students wears glasses. How many of the students wear glasses?

## Close and Check

## Focus Question

In this lesson, you learned about equivalent ratios. Can you use one ratio to write another ratio? Why might you want to do this?
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$\qquad$

## Do you know HOW?

1. Fill in three ratios equivalent to $2: 3$ on the multiplication table.

| $x$ | 1 | 2 | 3 | 4 |
| :---: | :---: | :---: | :---: | :---: |
| 1 |  |  |  |  |
| 2 |  |  |  |  |
| 3 |  |  |  |  |
| 4 |  |  |  |  |

2. Make a domino with 12 dots and an equivalent ratio of dots on the left to dots on the right as the first domino. Use the multiplication table above to help.


## Do you UNDERSTAND?

3. Reasoning An animal shelter can hold only 60 cats and dogs. The current ratio of cats to dogs is $5: 7$. Can the shelter plan to take in more dogs and cats? Tell whether you know.
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4. Writing Describe a situation where you could use the ratio of cats to dogs to make a plan or decision at the shelter.
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