G5-M4-Lesson 6

1. Find the value of the following.

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*  |  *  |  *
*  |  *  |  *
*  |  *  |  *
*  |  *  |  *
*  |  *  |  *
```
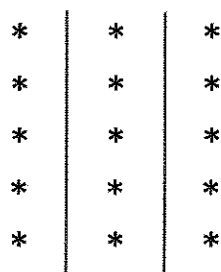
> The array shows a total of 15 stars. Each column represents 1 third.

$\frac{1}{3}$ of $15 = 5$

> To find 2 thirds, I can count the number of stars in two columns.

$\frac{2}{3}$ of $15 = 10$

$\frac{3}{3}$ of $15 = 15$

> $\frac{3}{3}$ represents *all* of the stars, or the amount found in all 3 columns.

2. Find $\frac{3}{4}$ of 12. Draw a set, and shade to show your thinking.

> The total in the array has to be 12. Since I'm trying to find fourths, I can draw a row of 4 circles. I can draw a second row of 4 circles and continue drawing rows until I have a total of 12 circles.

●|●|●|○
●|●|●|○
●|●|●|○
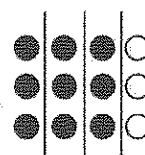
$\frac{3}{4}$ of $12 = 9$

> I shaded 3 out of the 4 columns. I counted how many circles I shaded to find the answer.

> I drew vertical lines to clearly show the fourths. Each column represents $\frac{1}{4}$ of 12.

8   **Lesson 6:**   Relate fractions as division of a set.

EUREKA MATH

3. How does knowing $\frac{1}{3}$ of 18 help you find $\frac{2}{3}$ of 18? Draw a picture to explain your thinking.

> I know I need a set of 18. Since I'm finding a third of 18, I drew rows of 3.

*From my drawing, I know $\frac{1}{3}$ of 18 is 6.*

$\frac{2}{3}$ of 18 is twice as much as $\frac{1}{3}$ of 18.

$\frac{2}{3}$ of 18 = 12.

> $\frac{1}{3}$ of 18 is 6, so $\frac{2}{3}$ of 18 is 2 × 6, or 12.
>
> $\frac{3}{3}$ of 18 would be 3 × 6, or 18.

4. Michael collected 21 sports cards. $\frac{3}{7}$ of the cards are baseball cards. How many cards are not baseball cards?

> The whole set is 21 cards. In order to show sevenths, I can draw 7 rectangles in a column and then continue drawing columns until I show all 21 cards.
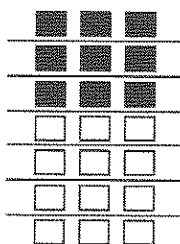
12 of the cards are not baseball cards.

> I drew horizontal lines to show the sevenths. I shaded in $\frac{3}{7}$ to show the collection of baseball cards.

> The question asked how many cards were *not* baseball cards, so I counted $\frac{4}{7}$, or 12, rectangles to get my answer.

> In the other examples, I drew rows first. In this question, I drew columns first. Either way is correct, and either way will show my thinking accurately.