G5-M2-Lesson 2

1. Round the factors to estimate the products.

I round each factor to the largest unit. For example, 387 rounds to 400.

The largest unit in 51 is tens. So, I round 51 to the nearest 10, which is 50.

a. $387 \times 51 \approx \underline{400} \times \underline{50} = \underline{20,000}$

Now that I have 2 rounded factors, I can use the distributive property to decompose the numbers. $400 \times 50 = (4 \times 100) \times (5 \times 10)$

I can use the associative property to regroup the factors.
$(4 \times 5) \times (100 \times 10) = 20 \times 1{,}000 = 20{,}000$

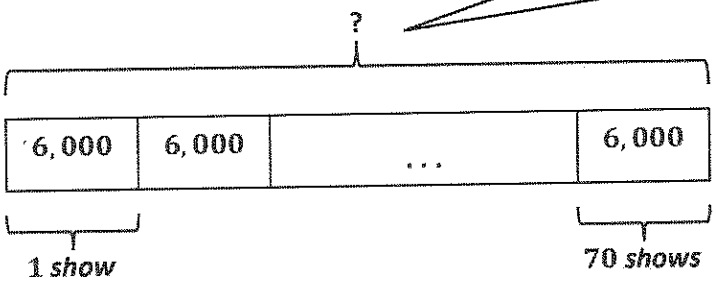
b. $6{,}286 \times 26 \approx \underline{6{,}000} \times \underline{25} = \underline{150{,}000}$

I could have chosen to round 25 to 30. However, multiplying by 25 is mental math for me. If I round 26 to 25, I know my estimated product will be closer to the actual product than if I round 26 to 30.

2. There are 6,015 seats available for each of the Radio City Rockettes Spring Spectacular dance shows. If there are a total of 68 shows, about how many tickets are available in all?

The problem says "about," so I know to estimate.

The unknown is the total number of tickets.



The long bar of the tape diagram indicates the total amount. There are about 70 shows and about 6,000 tickets for each show.

$6,000 \times 70$

$= 6 \text{ thousands} \times 7 \text{ tens} = 42 \text{ ten thousands} = 420,000$

$= (6 \times 7) \times (1,000 \times 10) = 42 \times 10,000 = 420,000$

About 420,000 tickets are available for the shows.

I can think about the problem in more than one way.