Fractions and Whole Numbers In Words And Visuals - Guided Lesson Explanation

Explanation to #1

This can be done it two ways.

Method 1: The first way is to use the area model. Since there are 10 students in the class, the area model has 10 parts.

1	2	3	4	5	6	7	8	9	10

One half of those 10 parts represents students that wear glasses. So if we color ½ of the area model starting at 1, we can determine the number of students.

1	2	3	4	5	6	7	8	9	10

In this case, we can see that 5 students wear glasses.

Method 2: We use 10 as a fraction.

$$10 = \frac{10}{1}$$

Multiply the numerators, then multiply the denominators.

$$\frac{10}{1} \times \frac{1}{2} = \frac{10 \times 1}{1 \times 2} = \frac{10}{2} = 5$$

So, 5 students in the class wear glasses.

Name _____   Date _____

Explanation to #2

Again, there are 2 ways to do this problem.

Method 1: Use an area model. The model isn't provided, so let's make one.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60

Since ¼ of the population of 60 are deer, we need to color ¼ of that model. It should look like this:

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60

That means that 15 of the animals are deer.

Method 2: Write the whole number as a fraction with 1 as the denominator.

We use 60 as a fraction.

$$60 \ = \ \frac{60}{1}$$

Multiply the numerators, then multiply the denominators.

$$\frac{60}{1} \times \frac{1}{4} = \frac{60 \times 1}{1 \times 4} \ = \ \frac{60}{2} = 15$$

 So, 15 deer are in the zoo.

Name _____   Date _____

Explanation to #3

Let's look at those two methods one more time.

Method one use the area model. Each piece of the model is a unit of $\frac{1}{7}$. This would just mean that $4 \times \frac{1}{7}$ would equal 4 of those units.

$\frac{1}{7}$	$\frac{2}{7}$	$\frac{3}{7}$	$\frac{4}{7}$	$\frac{5}{7}$	$\frac{6}{7}$	$\frac{7}{7}$

As we can see 4 of those units would be equal to: $\frac{4}{7}$

Method 2) Write the whole number as a fraction with 1 as the denominator.

We use 4 as a fraction.

$$4 = \frac{4}{1}$$

Multiply the numerators, then multiply the denominators.

$$\frac{4}{1} \times \frac{1}{7} = \frac{4 \times 1}{1 \times 7} = \frac{4}{7}$$

So, the proper fraction is $\frac{4}{7}$.