Fraction of a Set Worksheets

1. Laura and Sean find the product of $\frac{2}{3} \times 4$ using different methods.

   Laura: It's 2 thirds of 4.   *Sean:* It's 4 groups of 2 thirds.

   $$\frac{2}{3} \times 4 = \frac{4}{3} + \frac{4}{3} = 2 \times \frac{4}{3} = \frac{8}{3}$$

   $$\frac{2}{3} + \frac{2}{3} + \frac{2}{3} + \frac{2}{3} = 4 \times \frac{2}{3} = \frac{8}{3}$$

   Use words, pictures, or numbers to compare their methods in the space below.

2. Rewrite the following addition expressions as fractions as shown in the example.
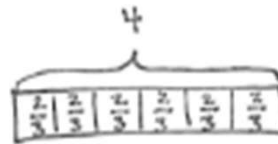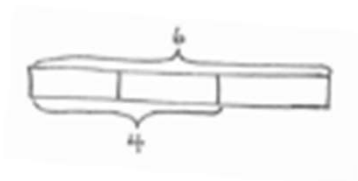
   Example: $\frac{2}{3} + \frac{2}{3} + \frac{2}{3} + \frac{2}{3} = \frac{4 \times 2}{3} = \frac{8}{3}$

   a. $\frac{7}{4} + \frac{7}{4} + \frac{7}{4} =$

   b. $\frac{14}{5} + \frac{14}{5} =$

   c. $\frac{4}{7} + \frac{4}{7} + \frac{4}{7} =$

3. Solve and model each problem as a fraction of a set and as repeated addition.

   Example: $\frac{2}{3} \times 6 = 2 \times \frac{6}{3} = 2 \times 2 = 4$ $6 \times \frac{2}{3} = \frac{6 \times 2}{3} = 4$

   a. $\frac{1}{2} \times 8$ $8 \times \frac{1}{2}$

   b. $\frac{3}{5} \times 10$ $10 \times \frac{3}{5}$

Fraction of a Set Worksheets

1. Laura and Sean find the product of $\frac{2}{3} \times 4$ using different methods.
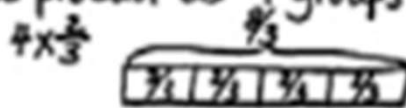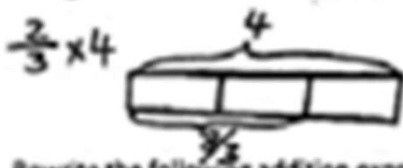
   Laura: It's 2 thirds of 4.

   Sean: It's 4 groups of 2 thirds.

   $\frac{2}{3} \times 4 = \frac{4}{3} + \frac{4}{3} = 2 \times \frac{4}{3} = \frac{8}{3}$

   $\frac{2}{3} + \frac{2}{3} + \frac{2}{3} + \frac{2}{3} = 4 \times \frac{2}{3} = \frac{8}{3}$

   Use words, pictures, or numbers to compare their methods in the space below.

   Both methods are correct. $\frac{2}{3} \times 4$ is 2 thirds of 4, and it will also have the same product as 4 groups of 2 thirds.

   $\frac{2}{3} \times 4$

   $4 \times \frac{2}{3}$

2. Rewrite the following addition expressions as fractions as shown in the example.

   Example: $\frac{2}{3} + \frac{2}{3} + \frac{2}{3} + \frac{2}{3} = \frac{4 \times 2}{3} = \frac{8}{3}$

   a. $\frac{7}{4} + \frac{7}{4} + \frac{7}{4} = \frac{3 \times 7}{4} = \frac{21}{4}$

   b. $\frac{14}{5} + \frac{14}{5} = \frac{2 \times 14}{5} = \frac{28}{5}$
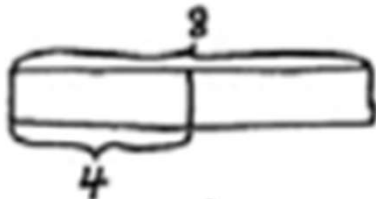
   c. $\frac{4}{7} + \frac{4}{7} + \frac{4}{7} = \frac{3 \times 4}{7} = \frac{12}{7}$

3. Solve and model each problem as a fraction of a set and as repeated addition.

   Example: $\frac{2}{3} \times 6 = 2 \times \frac{6}{3} = 2 \times 2 = 4.$

   $6 \times \frac{2}{3} = \frac{6 \times 2}{3} = 4$

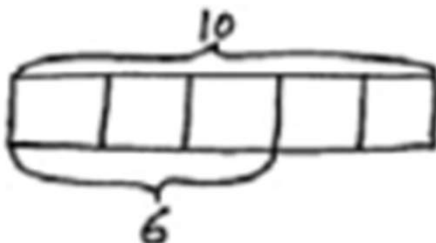   a. $\frac{1}{2} \times 8 = 1 \times \frac{8}{2} = 1 \times 4 = 4$

   $8 \times \frac{1}{2} = \frac{8 \times 1}{2} = \frac{8}{2} = 4$

   b. $\frac{3}{5} \times 10 = 3 \times \frac{10}{5} = 3 \times 2 = 6$

   $10 \times \frac{3}{5} = \frac{10 \times 3}{5} = \frac{30}{5} = 6$

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