# Lesson 5

## Problem Set

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

   b. 2 rows drawn; $\frac{1}{5} = \frac{2}{10}$, $\frac{1}{5} = \frac{1}{10} + \frac{1}{10} = \frac{2}{10}$, $\frac{1}{5} = 2 \times \frac{1}{10} = \frac{2}{10}$

   c. 4 rows drawn; $\frac{1}{3} = \frac{4}{12}$, $\frac{1}{3} = \frac{1}{12} + \frac{1}{12} + \frac{1}{12} + \frac{1}{12} = \frac{4}{12}$, $\frac{1}{3} = 4 \times \frac{1}{12} = \frac{4}{12}$

2. a. Area model shows $\frac{1}{2} = \frac{3}{6}$; $\frac{1}{2} = \frac{1}{6} + \frac{1}{6} + \frac{1}{6} = \frac{3}{6}$, $\frac{1}{2} = 3 \times \frac{1}{6} = \frac{3}{6}$

   b. Area model shows $\frac{1}{2} = \frac{4}{8}$; $\frac{1}{2} = \frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8} = \frac{4}{8}$, $\frac{1}{2} = 4 \times \frac{1}{8} = \frac{4}{8}$

   c. Area model shows $\frac{1}{2} = \frac{5}{10}$; $\frac{1}{2} = \frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10} = \frac{5}{10}$, $\frac{1}{2} = 5 \times \frac{1}{10} = \frac{5}{10}$

   d. Area model shows $\frac{1}{3} = \frac{2}{6}$; $\frac{1}{3} = \frac{1}{6} + \frac{1}{6} = \frac{2}{6}$, $\frac{1}{3} = 2 \times \frac{1}{6} = \frac{2}{6}$

   e. Area model shows $\frac{1}{3} = \frac{4}{12}$; $\frac{1}{3} = \frac{1}{12} + \frac{1}{12} + \frac{1}{12} + \frac{1}{12} = \frac{4}{12}$, $\frac{1}{3} = 4 \times \frac{1}{12} = \frac{4}{12}$

   f. Area model shows $\frac{1}{4} = \frac{3}{12}$; $\frac{1}{4} = \frac{1}{12} + \frac{1}{12} + \frac{1}{12} = \frac{3}{12}$, $\frac{1}{4} = 3 \times \frac{1}{12} = \frac{3}{12}$

3. Explanations will vary.

## Exit Ticket

1. a. 2 rows drawn; $\frac{1}{4} = \frac{1}{8} + \frac{1}{8} = \frac{2}{8}$, $\frac{1}{4} = 2 \times \frac{1}{8} = \frac{2}{8}$

   b. 3 rows drawn; $\frac{1}{4} = \frac{1}{12} + \frac{1}{12} + \frac{1}{12} = \frac{3}{12}$, $\frac{1}{4} = 3 \times \frac{1}{12} = \frac{3}{12}$

2. Area model shows $\frac{3}{5} = \frac{6}{10}$; $\frac{3}{5} = \frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10} = \frac{6}{10}$, $\frac{3}{5} = 6 \times \frac{1}{10} = \frac{6}{10}$

## Homework

1. a. $6, \frac{1}{6}, \frac{1}{6}, \frac{1}{6}$

   b. 2 rows drawn; $\frac{1}{4} = \frac{2}{8}, \frac{1}{4} = \frac{1}{8} + \frac{1}{8} = \frac{2}{8}, \frac{1}{4} = 2 \times \frac{1}{8} = \frac{2}{8}$

   c. 4 rows drawn; $\frac{1}{4} = \frac{4}{16}, \frac{1}{4} = \frac{1}{16} + \frac{1}{16} + \frac{1}{16} + \frac{1}{16} = \frac{4}{16}, \frac{1}{4} = 4 \times \frac{1}{16} = \frac{4}{16}$

2. a. Area model shows $\frac{1}{3} = \frac{2}{6}; \frac{1}{3} = \frac{1}{6} + \frac{1}{6} = \frac{2}{6}, \frac{1}{3} = 2 \times \frac{1}{6} = \frac{2}{6}$

   b. Area model shows $\frac{1}{3} = \frac{3}{9}; \frac{1}{3} = \frac{1}{9} + \frac{1}{9} + \frac{1}{9} = \frac{3}{9}, \frac{1}{3} = 3 \times \frac{1}{9} = \frac{3}{9}$

   c. Area model shows $\frac{1}{3} = \frac{4}{12}; \frac{1}{3} = \frac{1}{12} + \frac{1}{12} + \frac{1}{12} + \frac{1}{12} = \frac{4}{12}, \frac{1}{3} = 4 \times \frac{1}{12} = \frac{4}{12}$

   d. Area model shows $\frac{1}{3} = \frac{5}{15}; \frac{1}{3} = \frac{1}{15} + \frac{1}{15} + \frac{1}{15} + \frac{1}{15} + \frac{1}{15} = \frac{5}{15}, \frac{1}{3} = 5 \times \frac{1}{15} = \frac{5}{15}$

   e. Area model shows $\frac{1}{5} = \frac{2}{10}; \frac{1}{5} = \frac{1}{10} + \frac{1}{10} = \frac{2}{10}, \frac{1}{5} = 2 \times \frac{1}{10} = \frac{2}{10}$

   f. Area model shows $\frac{1}{5} = \frac{3}{15}; \frac{1}{5} = \frac{1}{15} + \frac{1}{15} + \frac{1}{15} = \frac{3}{15}, \frac{1}{5} = 3 \times \frac{1}{15} = \frac{3}{15}$

3. Explanations will vary.