

## Lesson 23

### Problem Set

- $\frac{0}{3}, \frac{1}{3}, \frac{2}{3}, \frac{3}{3}, \frac{4}{3}, \frac{5}{3}, \frac{6}{3}; \frac{0}{3}, \frac{3}{3}, \frac{6}{3}$  circled; 0, 1, 2 recorded
  - $\frac{0}{2}, \frac{1}{2}, \frac{2}{2}, \frac{3}{2}, \frac{4}{2}, \frac{5}{2}, \frac{6}{2}, \frac{7}{2}, \frac{8}{2}; \frac{0}{2}, \frac{2}{2}, \frac{4}{2}, \frac{6}{2}, \frac{8}{2}$  circled; 0, 1, 2, 3, 4 recorded
- $\left(\frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4}\right) + \left(\frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4}\right) + \left(\frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4}\right) = 3$
- Answer provided
  - $6 \times \frac{1}{2} = 3 \times \frac{2}{2} = 3$ ; number line supports answer.
  - $12 \times \frac{1}{4} = 3 \times \frac{4}{4} = 3$ ; number line supports answer.
- Answer provided
  - $7 \times \frac{1}{2} = \left(3 \times \frac{2}{2}\right) + \frac{1}{2} = 3 + \frac{1}{2} = 3\frac{1}{2}$ ; number line supports answer.
  - $10 \times \frac{1}{4} = \left(2 \times \frac{4}{4}\right) + \frac{2}{4} = 2 + \frac{2}{4} = 2\frac{2}{4}$ ; number line supports answer.
  - $14 \times \frac{1}{3} = \left(4 \times \frac{3}{3}\right) + \frac{2}{3} = 4 + \frac{2}{3} = 4\frac{2}{3}$ ; number line supports answer.

### Exit Ticket

- $8 \times \frac{1}{2} = 4 \times \frac{2}{2} = 4$ ; number line supports answer.
- $7 \times \frac{1}{4} = \left(1 \times \frac{4}{4}\right) + \frac{3}{4} = 1\frac{3}{4}$ ; number line supports answer.
- $13 \times \frac{1}{3} = \left(4 \times \frac{3}{3}\right) + \frac{1}{3} = 4\frac{1}{3}$ ; number line supports answer.

## Homework

1. a.  $\frac{0}{4}, \frac{1}{4}, \frac{2}{4}, \frac{3}{4}, \frac{4}{4}, \frac{5}{4}, \frac{6}{4}; \frac{0}{4}, \frac{4}{4}$  circled; 0, 1 recorded
- b.  $\frac{0}{6}, \frac{1}{6}, \frac{2}{6}, \frac{3}{6}, \frac{4}{6}, \frac{5}{6}, \frac{6}{6}, \frac{7}{6}, \frac{8}{6}, \frac{9}{6}, \frac{10}{6}, \frac{11}{6}, \frac{12}{6}, \frac{13}{6}, \frac{14}{6}; \frac{0}{6}, \frac{6}{6}, \frac{12}{6}$  circled ; 0, 1, 2 recorded
2.  $\left(\frac{1}{3} + \frac{1}{3} + \frac{1}{3}\right) + \left(\frac{1}{3} + \frac{1}{3} + \frac{1}{3}\right) + \left(\frac{1}{3} + \frac{1}{3} + \frac{1}{3}\right) + \left(\frac{1}{3} + \frac{1}{3} + \frac{1}{3}\right) = 4$
3. a. Answer provided
- b.  $10 \times \frac{1}{2} = 5 \times \frac{2}{2} = 5$ ; number line supports answer.
- c.  $8 \times \frac{1}{4} = 2 \times \frac{4}{4} = 2$ ; number line supports answer.
4. a. Answer provided
- b.  $7 \times \frac{1}{4} = \left(1 \times \frac{4}{4}\right) + \frac{3}{4} = 1 + \frac{3}{4} = 1\frac{3}{4}$ ; number line supports answer.
- c.  $11 \times \frac{1}{5} = \left(2 \times \frac{5}{5}\right) + \frac{1}{5} = 2 + \frac{1}{5} = 2\frac{1}{5}$ ; number line supports answer.
- d.  $7 \times \frac{1}{2} = \left(3 \times \frac{2}{2}\right) + \frac{1}{2} = 3 + \frac{1}{2} = 3\frac{1}{2}$ ; number line supports answer.
- e.  $9 \times \frac{1}{5} = \left(1 \times \frac{5}{5}\right) + \frac{4}{5} = 1 + \frac{4}{5} = 1\frac{4}{5}$ ; number line supports answer.