Problem Set

1. Number line marked 0 and 1 on top and \(0, \frac{1}{2}, \frac{2}{2}\) on the bottom; \(\frac{2}{4}\) shaded; \(\frac{3}{6}\) shaded; \(\frac{1}{2} = \frac{1 \times 3}{2 \times 3} = \frac{3}{6}\) shaded; \(\frac{1}{2} = \frac{1 \times 5}{2 \times 5} = \frac{5}{10}\)

2. Number line marked 0 and 1 on top and \(0, \frac{1}{3}, \frac{2}{3}, \frac{3}{3}\) on the bottom; \(\frac{2}{6}\) shaded; \(\frac{3}{6}\) shaded, \(\frac{1}{3} = \frac{1 \times 2}{3 \times 2} = \frac{2}{6}\) shaded,
\(\frac{1}{3} = \frac{1 \times 3}{3 \times 3} = \frac{3}{9}\)
\(\frac{4}{12}\) shaded, \(\frac{1}{4} = \frac{1 \times 3}{4 \times 3} = \frac{3}{12}\) shaded, \(\frac{1}{3} = \frac{1 \times 5}{3 \times 5} = \frac{5}{15}\)

3. Number line marked 0 and 1 on top and \(0, \frac{1}{4}, \frac{2}{4}, \frac{3}{4}, \frac{4}{4}\) on the bottom; \(\frac{6}{8}\) shaded, \(\frac{3}{4}\) shaded,
\(\frac{3}{4} = \frac{3 \times 3}{4 \times 3} = \frac{9}{12}\)
\(\frac{3}{12}\) shaded, \(\frac{3}{4} = \frac{3 \times 4}{4 \times 4} = \frac{12}{16}\) shaded, \(\frac{3}{4} = \frac{3 \times 5}{4 \times 5} = \frac{15}{20}\)

4. Number line marked 0 and 1 on top and \(0, \frac{1}{5}, \frac{2}{5}, \frac{3}{5}, \frac{4}{5}, \frac{5}{5}\) on the bottom; examples may vary.

Exit Ticket

Number line marked 0 and 1 on top and \(0, \frac{1}{6}, \frac{2}{6}, \frac{3}{6}, \frac{4}{6}, \frac{5}{6}\) on the bottom; \(\frac{2}{12}\) shaded; \(\frac{3}{18}\) shaded,
\(\frac{1}{6} = \frac{1 \times 3}{6 \times 3} = \frac{3}{18}\); \(\frac{4}{24}\) shaded, \(\frac{1}{6} = \frac{1 \times 4}{6 \times 4} = \frac{4}{24}\)

Homework

1. Number line marked 0 and 1 on top and \(0, \frac{1}{3}, \frac{2}{3}, \frac{3}{3}\) on the bottom; \(\frac{2}{6}\) shaded; \(\frac{3}{9}\) shaded, \(\frac{1}{3} = \frac{1 \times 3}{3 \times 3} = \frac{3}{9}\) shaded,
\(\frac{1}{3} = \frac{1 \times 4}{3 \times 4} = \frac{4}{12}\) shaded, \(\frac{1}{3} = \frac{1 \times 5}{3 \times 5} = \frac{5}{15}\)

2. Number line marked 0 and 1 on top and \(0, \frac{1}{4}, \frac{2}{4}, \frac{3}{4}, \frac{4}{4}\) on the bottom; \(\frac{2}{8}\) shaded, \(\frac{1}{4} = \frac{1 \times 2}{4 \times 2} = \frac{2}{8}\) shaded,
\(\frac{1}{4} = \frac{1 \times 3}{4 \times 3} = \frac{3}{12}\)
\(\frac{4}{16}\) shaded, \(\frac{1}{4} = \frac{1 \times 4}{4 \times 4} = \frac{4}{16}\) shaded, \(\frac{1}{4} = \frac{1 \times 5}{4 \times 5} = \frac{5}{20}\)

3. Number line marked 0 and 1 on top and \(0, \frac{1}{5}, \frac{2}{5}, \frac{3}{5}, \frac{4}{5}, \frac{5}{5}\) on the bottom; \(\frac{8}{10}\) shaded, \(\frac{4}{5}\) shaded,
\(\frac{4}{5} = \frac{4 \times 3}{5 \times 3} = \frac{12}{15}\)
\(\frac{4}{15}\) shaded, \(\frac{4}{5} = \frac{4 \times 4}{5 \times 4} = \frac{16}{20}\) shaded, \(\frac{4}{5} = \frac{4 \times 5}{5 \times 5} = \frac{20}{25}\)

4. Number line marked 0 and 1 on top and \(0, \frac{1}{8}, \frac{2}{8}, \frac{3}{8}, \frac{4}{8}, \frac{5}{8}, \frac{6}{8}, \frac{7}{8}, \frac{8}{8}\) on the bottom; examples may vary.