

Worksheet 1 (Inequalities) Solutions

Answer Key:

1a.  $S = [1, \infty)$

1b.  $S = \left(-\frac{1}{2}, \frac{5}{6}\right]$

1c.  $S = (-2, -1] \cup \left(\frac{1}{3}, \frac{2}{3}\right]$

1d.  $S = (-\infty, 1) \cup (2, \infty)$

1e.  $S = (-2, -1) \cup (1, 2)$

2a.  $S = \left(-\infty, -\frac{1}{2}\right) \cup \left(\frac{7}{2}, \infty\right)$

2b.  $S = (-\infty, -7] \cup \left[-\frac{1}{5}, \infty\right)$

2c.  $S = \emptyset$

2d.  $S = \left\{x \in \mathbb{R} : x \neq -\frac{1}{3}\right\} = \left(-\infty, -\frac{1}{3}\right) \cup \left(-\frac{1}{3}, \infty\right)$ .

2e.  $S = (-\infty, -2] \cup \left[\frac{4}{3}, \infty\right)$