

Solutions1. Evaluate $5 - 3(-7 - (-4 + 1))^2$

$$\begin{aligned}
 &= 5 - 3(-7 - (-3))^2 \\
 &= 5 - 3(-7 + 3)^2 \\
 &= 5 - 3(-4)^2 = 5 - 3 \cdot 16 = 5 - 48 = -43
 \end{aligned}$$

2. $\frac{y^2 \pm \sqrt{x+7}}{2y}$ when $x = 9$ and $y = 3$

$$\begin{aligned}
 \frac{3^2 \pm \sqrt{9+7}}{2 \cdot 3} &= \frac{9 \pm \sqrt{16}}{6} \\
 &= \frac{9 \pm 4}{6} = \begin{cases} \frac{13}{6} \\ \frac{5}{6} \end{cases}
 \end{aligned}$$

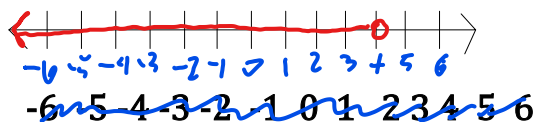
3. List the elements of the set $\{x \mid x \text{ is a natural number between 7 and 14}\}$.

$$= \{8, 9, 10, 11, 12, 13\}$$

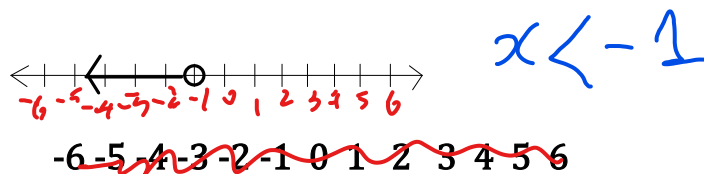
4. Evaluate: $-|-7|$

$$= -7$$

5. Graph the real numbers less than 4



6. Write the Inequality for a given solution



7. Simplify each. Leave your answer as an improper fraction.

a)

$$\frac{42}{12} = \frac{7 \times 6}{2 \times 6} = \boxed{\frac{7}{2}}$$

b)

$$\frac{25}{20} = \frac{5 \cdot 5}{5 \cdot 4} = \boxed{\frac{5}{4}}$$

8. Evaluate : a) $\frac{2}{7} + \frac{5}{3}$

$$\frac{2}{7} + \frac{5}{3} = \frac{6}{21} + \frac{35}{21} = \frac{41}{21}$$

b) $\frac{-5}{8} - \frac{9}{2}$

$$-\frac{5}{8} - \frac{9}{2} = \frac{-5}{8} - \frac{36}{8} = -\frac{41}{8}$$

c) $\frac{2}{5} \cdot \frac{11}{-4}$

$$\frac{2}{5} \cdot \frac{11}{-4} = \frac{22}{-20} = -\frac{11}{10}$$

d) $\frac{2}{11} \div \frac{5}{4}$

$$\frac{2}{11} \div \frac{5}{4} = \frac{2}{11} \cdot \frac{4}{5} = \frac{8}{55}$$