

$$\textcircled{2} \quad 8\frac{1}{4} + \left(4\frac{1}{9} + \frac{3}{4}\right)$$

$$8\frac{9}{36} + \left(4\frac{4}{36} + \frac{27}{36}\right)$$

$$8\frac{9}{36} + 4\frac{31}{36} = 12\frac{40}{36}$$

$$13\frac{4}{36} = 13\frac{1}{9}$$

$$\textcircled{4} \quad h + 4\frac{2}{18} - \frac{1}{4} \quad \text{when } h = 3\frac{3}{4}$$

$$3\frac{3}{4} + 4\frac{1}{9} - 1\frac{1}{4}$$

$$3\frac{27}{36} + 4\frac{4}{36} - 1\frac{9}{36} = 6\frac{22}{36} = 6\frac{11}{18}$$

7.6 Addition & Subtraction Equations with Fractions

Use the properties of equality to write equivalent equations, keeping the two sides of the equation balanced.

Remember to use inverse operations to isolate the variable.

Example: Solve.

$$1.) \quad d - \frac{4}{5} = \frac{3}{5}$$

$$d = \frac{4}{5} + \frac{3}{5}$$

$$d = \frac{7}{5}$$

$$d = 1\frac{2}{5}$$

$$2.) \quad t - 7\frac{11}{12} = 2\frac{1}{6}$$

$$t = 7\frac{11}{12} + 2\frac{1}{6}$$

$$t = 7\frac{11}{12} + 2\frac{2}{12}$$

$$t = 9\frac{13}{12}$$

$$t = 8\frac{1}{4}$$

Example: Solve.

$$3.) \boxed{w} - 2\frac{1}{4} = 4\frac{5}{12}$$

$$+ 2\frac{1}{4} \quad | \quad + 2\frac{1}{4}$$

$$w = 4\frac{5}{12} + 2\frac{1 \cdot 3}{4 \cdot 3}$$

$$w = 4\frac{5}{12} + 2\frac{3}{12}$$

$$w = 6\frac{8 \div 4}{12 \div 4}$$

$$\boxed{w = 6\frac{2}{3}}$$

$$4.) 1\frac{3}{4} + \boxed{f} = 3\frac{7}{8}$$

$$- 1\frac{3}{4} \quad | \quad - 1\frac{3}{4}$$

$$f = 3\frac{7}{8} - 1\frac{3 \cdot 2}{4 \cdot 2}$$

$$f = 3\frac{7}{8} - 1\frac{6}{8}$$

$$\boxed{f = 2\frac{1}{8}}$$

Example: Solve.

$$5.) \cancel{5} + \boxed{k} = 6\frac{1}{10}$$

$$- 6 \quad | \quad - 6$$

$$k = 6\frac{1}{10} - 6$$

$$\boxed{k = \frac{1}{10}}$$

$$6.) 12\frac{11}{12} = \boxed{a} + 5\frac{5}{12}$$

$$- 5\frac{5}{12} \quad | \quad - 5\frac{5}{12}$$

$$12\frac{11}{12} - 5\frac{5}{12} = a$$

$$7\frac{6 \div 6}{12 \div 6} = a$$

$$\boxed{7\frac{1}{2} = a}$$