

Mathematics Pre-test
Arithmetic of fractions

1. Prime factor 180.

- a. $2^2 \cdot 3^2 \cdot 5$ b. $5^2 \cdot 7^2$ c. $2^4 \cdot 3^3$ d. it is prime

2. Simplify the fraction $\frac{45}{72}$

- a. $\frac{5}{8}$ b. $\frac{45}{72}$ c. $\frac{9}{8}$ d. $\frac{5}{9}$

3. Add and simplify, if possible: $\frac{18}{62} + \frac{10}{62}$

- a. $\frac{15}{32}$ b. $\frac{13}{30}$ c. $\frac{14}{31}$ d. $\frac{13}{31}$

4. Subtract and simplify, if possible:

$$\begin{array}{r} 12\frac{1}{9} \\ - 2\frac{8}{9} \\ \hline \end{array}$$

- a. $10\frac{2}{9}$ b. $9\frac{3}{9}$ c. $9\frac{2}{9}$ d. $10\frac{7}{9}$

5. Multiply and write the product in simplest form: $\frac{3}{7} \cdot \frac{21}{15}$

- a. $\frac{15}{49}$ b. $\frac{12}{11}$ c. $\frac{3}{5}$ d. $\frac{9}{14}$

6. Build up the following fraction: $\frac{10}{7} = \frac{\quad}{21}$

a. $\frac{10}{21}$

b. $\frac{3}{21}$

c. $\frac{30}{21}$

d. $\frac{70}{21}$

7. Find the Lowest Common Denominator of the following fractions:

$\frac{3}{20}$ and $\frac{1}{12}$

a. 60

b. 24

c. 130

d. 12

8. Add and simplify, if possible:

$$\begin{array}{r} 13\frac{2}{8} \\ + 1\frac{7}{12} \\ \hline \end{array}$$

a. $14\frac{5}{6}$

b. $14\frac{5}{24}$

c. $15\frac{3}{24}$

d. $15\frac{1}{2}$

9. Subtract and simplify, if possible: $4\frac{1}{9} - \frac{7}{12}$

a. $4\frac{5}{24}$

b. $3\frac{25}{36}$

c. $3\frac{19}{36}$

d. $3\frac{7}{36}$