

GRADE 9 – Fractions Worksheet1. Change each mixed number to an *improper fraction*:

- a) $3\frac{1}{4}$ b) $5\frac{1}{2}$ c) $2\frac{7}{8}$ d) $4\frac{7}{9}$ e) $9\frac{1}{7}$ f) $8\frac{2}{3}$
 g) $11\frac{3}{4}$ h) $7\frac{3}{5}$ i) $51\frac{1}{3}$ j) $12\frac{4}{5}$ k) $9\frac{5}{8}$ l) $11\frac{7}{11}$

2. Reduce to *lowest terms*:

- a) $\frac{2}{6}$ b) $\frac{3}{9}$ c) $\frac{7}{14}$ d) $\frac{5}{20}$ e) $\frac{24}{30}$ f) $\frac{72}{36}$
 g) $\frac{24}{96}$ h) $\frac{15}{27}$ i) $\frac{16}{64}$ j) $\frac{72}{96}$ k) $\frac{93}{81}$ l) $\frac{15}{27}$

3. Copy and complete the equivalent fractions:

- a) $\frac{5}{7} = \frac{\cdot}{49}$ b) $\frac{9}{11} = \frac{\cdot}{33}$ c) $\frac{15}{10} = \frac{3}{\cdot}$ d) $\frac{1}{9} = \frac{4}{\cdot}$
 e) $\frac{45}{18} = \frac{\cdot}{2}$ f) $\frac{4}{5} = \frac{\cdot}{35}$ g) $\frac{7}{8} = \frac{21}{\cdot} = \frac{\cdot}{24} = \frac{28}{\cdot} = \frac{84}{\cdot}$ h) $\frac{9}{12} = \frac{3}{\cdot} = \frac{\cdot}{24} = \frac{27}{\cdot} = \frac{81}{\cdot}$

4. Arrange the following fractions in order from least to greatest:

- a) $\frac{1}{2}, 2, \frac{1}{16}, \frac{3}{8}, \frac{3}{4}$ b) $\frac{7}{12}, \frac{5}{6}, \frac{1}{8}, \frac{3}{4}, \frac{5}{8}$

5. Evaluate:

- a) $2\frac{2}{3} + 1\frac{1}{5}$ b) $3\frac{1}{5} - 1\frac{2}{3}$ c) $3\frac{2}{3} + 1\frac{1}{4}$ d) $4\frac{1}{3} - 1\frac{1}{4}$
 e) $3\frac{3}{5} - \left(3\frac{1}{2} - 2\frac{1}{3}\right)$ f) $4\frac{1}{2} + 3\frac{3}{8} - 7\frac{7}{8}$ g) $\left(3\frac{5}{6} + 1\frac{7}{8}\right) - \left(2\frac{3}{8} + \frac{5}{6}\right)$ h) $\frac{5}{6} + \frac{5}{6} + \left(\frac{5}{6} - \frac{3}{4}\right) - \frac{3}{4}$

6. Maxine's report had five parts. The first was $\frac{3}{4}$ of a page, the second was $2\frac{1}{2}$ pages, the third was $3\frac{3}{4}$ pages, the fourth was 3 pages and the fifth was $1\frac{1}{2}$ pages. How long was her report?

7. Eight students shared equally three Hawaiian pizzas and two pepperoni pizzas. If each pizza was cut into six slices, how many slices did each student get?

8. State the reciprocal for each of the following:

- a) $\frac{3}{4}$ b) 5 c) $9\frac{1}{3}$ d) 1 e) $4\frac{2}{3}$ f) $6\frac{3}{5}$ g) $\frac{a}{b}$

9. Evaluate:

- a) $\frac{1}{2} \times 9$ b) $\frac{3}{5} \times \frac{10}{27}$ c) $\frac{2}{3} \times 15$ d) $\frac{2}{3} \times \frac{3}{4}$
 e) $\frac{3}{4} \div \frac{2}{3}$ f) $\frac{4}{5} \div \frac{3}{5}$ g) $\frac{5}{8} \div \frac{5}{4}$ h) $\frac{7}{9} \div \frac{2}{3}$
 i) $2\frac{1}{2} \times 2\frac{1}{3}$ j) $2\frac{1}{2} \div 1\frac{1}{2}$ k) $3\frac{1}{5} \times 3\frac{4}{5}$ l) $5 \div \frac{7}{8}$

10. Evaluate:

- a) $\left(\frac{1}{3} + \frac{1}{2}\right) \times \frac{6}{7}$ b) $\frac{3}{4} - \frac{2}{5} \times \frac{5}{6}$ c) $\frac{2}{3} \times \frac{1}{2} \times \frac{3}{4}$ d) $\frac{4}{5} \times \frac{3}{4} \div \frac{1}{2}$
 e) $\frac{5}{6} \div \frac{2}{3} \times \frac{1}{5}$ f) $\frac{2}{3} \div \left(\frac{2}{3} + \frac{2}{3}\right)$ g) $\frac{7}{8} \times \left(\frac{4}{7} \div \frac{2}{5}\right)$ h) $\frac{3}{5} \div \frac{2}{3} \times \frac{3}{5}$

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Answers: 1a) $\frac{13}{4}$ b) $\frac{11}{2}$ c) $\frac{23}{8}$ d) $\frac{43}{9}$ e) $\frac{64}{7}$ f) $\frac{26}{3}$
g) $\frac{47}{4}$ h) $\frac{38}{5}$ i) $\frac{154}{3}$ j) $\frac{64}{5}$ k) $\frac{77}{8}$ l) $\frac{128}{11}$

2a) $\frac{1}{3}$ b) $\frac{1}{3}$ c) $\frac{1}{2}$ d) $\frac{1}{4}$ e) $\frac{4}{5}$ f) 2
g) $\frac{1}{4}$ h) $\frac{5}{9}$ i) $\frac{1}{4}$ j) $\frac{3}{4}$ k) $\frac{31}{27}$ l) $\frac{5}{9}$

3a) 35 b) 27 c) 2 d) 36
e) 5 f) 28 g) 24, 21, 32, 96 h) 4, 18, 36, 108

4a) $\frac{1}{16}, \frac{3}{8}, \frac{1}{2}, \frac{3}{4}, 2$ b) $\frac{1}{8}, \frac{7}{12}, \frac{5}{8}, \frac{3}{4}, \frac{5}{6}$

5a) $\frac{58}{15}$ b) $\frac{23}{15}$ c) $\frac{59}{12}$ d) $\frac{37}{12}$
e) $\frac{73}{30}$ f) 0 g) $\frac{5}{2}$ l) 1

6. 11 and $\frac{1}{2}$ pages 7. 3 and $\frac{3}{4}$ of a slice

8a) $\frac{4}{3}$ b) $\frac{1}{5}$ c) $\frac{3}{28}$ d) 1 e) $\frac{3}{14}$ f) $\frac{5}{33}$ g) $\frac{b}{a}$

9a) $\frac{9}{2}$ b) $\frac{2}{9}$ c) 10 d) $\frac{1}{2}$
e) $\frac{9}{8}$ f) $\frac{4}{3}$ g) $\frac{1}{2}$ h) $\frac{7}{6}$
i) $\frac{35}{6}$ j) $\frac{5}{3}$ k) $\frac{304}{25}$ l) $\frac{40}{7}$

10a) $\frac{5}{7}$ b) $\frac{5}{12}$ c) $\frac{1}{4}$ d) $\frac{6}{5}$
e) $\frac{1}{4}$ f) $\frac{1}{2}$ g) $\frac{5}{4}$ h) $\frac{27}{50}$