

<b>Fractions Review – worksheet</b>
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I – Change the denominator:

$$\frac{2}{5} = \frac{8}{20}$$

$$\frac{3}{4} = \frac{9}{12}$$

$$\frac{15}{36} = \frac{5}{12}$$

$$6 = \frac{18}{3}$$

II – Change form:

1) Rewrite in mixed number:

$$\frac{26}{12} = 2\frac{1}{6}$$

$$\frac{35}{4} = 8\frac{3}{4}$$

$$\frac{128}{3} = 42\frac{2}{3}$$

$$-\frac{48}{16} = -3$$

2) Rewrite as an improper fraction

$$5\frac{2}{3} = \frac{17}{3}$$

$$3\frac{7}{8} = \frac{31}{8}$$

$$-4\frac{1}{3} = -\frac{13}{3}$$

$$3\frac{1}{2} = \frac{7}{2}$$

3) Rewrite in decimal form and say when it is exact, otherwise, give an approximation to the nearest hundredth.

$$\frac{14}{21} = 0.67 \text{ (not exact)}$$

$$\frac{27}{5} = 5.4 \text{ (exact)}$$

$$\frac{55}{22} = 2.5 \text{ (exact)}$$

$$\frac{31}{7} \approx 4.43 \text{ (not exact)}$$

III – Simplify (show your work):

$$\frac{45}{80} = \frac{5 \times 9}{5 \times 16} = \frac{9}{16}$$

$$\frac{60}{75} = \frac{4 \times 15}{5 \times 15} = \frac{4}{5}$$

$$\frac{26}{39} = \frac{2 \times 13}{3 \times 13} = \frac{2}{3}$$

$$\frac{48}{20} = \frac{12 \times 4}{5 \times 4} = \frac{12}{5}$$

$$\frac{21}{28} = \frac{3 \times 7}{4 \times 7} = \frac{3}{4}$$

$$\frac{12}{27} = \frac{4 \times 3}{9 \times 3} = \frac{4}{9}$$

IV – Multiply:

$$\frac{3}{4} \times \frac{11}{12} = \frac{\cancel{3} \times 11}{4 \times \cancel{3} \times 4} = \frac{11}{16}$$

$$\frac{5}{7} \times \frac{28}{15} = \frac{5 \times \cancel{7} \times 4}{\cancel{7} \times 5 \times 3} = \frac{4}{3}$$

$$\frac{18}{9} \times \frac{14}{21} = \frac{\cancel{9} \times 2 \times \cancel{7} \times 2}{\cancel{9} \times 3 \times \cancel{7}} = \frac{4}{3}$$

$$\frac{32}{27} \times \frac{9}{8} = \frac{\cancel{8} \times 4 \times \cancel{9}}{3 \times \cancel{9} \times \cancel{8}} = \frac{4}{3}$$

V – Add and Subtract:

$$\frac{5}{3} + \frac{7}{3} = \frac{12}{3} = 4$$

$$\frac{5}{7} + \frac{5}{14} = \frac{10}{14} + \frac{5}{14} = \frac{15}{14}$$

$$\frac{5}{11} - \frac{48}{121} = \frac{55}{121} - \frac{48}{121} = \frac{7}{121}$$

$$\frac{2}{5} - \frac{3}{4} = \frac{8}{20} - \frac{15}{20} = -\frac{7}{20}$$

$$\frac{9}{21} - \frac{5}{12} = \frac{36}{84} - \frac{35}{84} = \frac{1}{84}$$

$$\frac{5}{27} + \frac{8}{81} = \frac{15}{81} + \frac{8}{81} = \frac{23}{81}$$

VI – Divide:

$$\frac{2}{3} \div \frac{7}{9} = \frac{2}{3} \times \frac{9}{7} = \frac{2 \times 3 \times 3}{3 \times 7} = \frac{6}{7}$$

$$3 \div \frac{4}{5} = 3 \times \frac{5}{4} = \frac{15}{4}$$

$$\frac{27}{5} \div 3 = \frac{27}{5} \times \frac{1}{3} = \frac{9}{5}$$

$$\frac{\frac{5}{6}}{\frac{1}{3}} = \frac{5}{6} \times 3 = \frac{5}{2}$$

$$\frac{3}{\frac{9}{2}} = 3 \times \frac{2}{9} = \frac{2}{3}$$

$$\frac{\frac{7}{2}}{21} = \frac{7}{2} \times \frac{1}{21} = \frac{7}{2 \times 7 \times 3} = \frac{1}{6}$$

$$\frac{4}{5} \div \frac{2}{3} = \frac{4}{5} \times \frac{3}{2} = \frac{2 \times 2 \times 3}{5 \times 2} = \frac{6}{5}$$

$$5 \div \frac{15}{4} = 5 \times \frac{4}{15} = \frac{5 \times 4}{5 \times 3} = \frac{4}{3}$$

$$\frac{5}{7} \div 2 = \frac{5}{7} \times \frac{1}{2} = \frac{5}{14}$$

$$\frac{\frac{12}{25}}{\frac{3}{5}} = \frac{12}{25} \times \frac{5}{3} = \frac{\cancel{3} \times 4 \times \cancel{5}}{5 \times 5 \times \cancel{3}} = \frac{4}{5}$$

$$\frac{25}{\frac{15}{4}} = 25 \times \frac{4}{15} = \frac{5 \times 5 \times 4}{5 \times 3} = \frac{20}{3}$$

$$\frac{\frac{5}{6}}{9} = \frac{5}{6} \times \frac{1}{9} = \frac{5}{54}$$

V – PEDMAS:

$$A = \frac{2}{3} - 5 \times \frac{7}{6} + 1 = \frac{2}{3} - \frac{35}{6} + 1 = \frac{4}{6} - \frac{35}{6} + \frac{6}{6} = -\frac{25}{6}$$

$$B = 3 - 2 \times \frac{4}{5} + \frac{3}{4} = 3 - \frac{8}{5} + \frac{3}{4} = \frac{60}{20} - \frac{32}{20} + \frac{15}{20} = \frac{43}{20}$$

$$C = 5 \left( \frac{2}{3} - \frac{5}{9} \right) + 2 = 5 \left( \frac{6}{9} - \frac{5}{9} \right) + 2 = 5 \times \frac{1}{9} + 2 = \frac{5}{9} + \frac{18}{9} = \frac{23}{9}$$

$$D = \frac{2}{3} + \frac{5}{6} \times 5 - \frac{8}{9} = \frac{2}{3} + \frac{25}{6} - \frac{8}{9} = \frac{12}{18} + \frac{75}{18} - \frac{16}{18} = \frac{71}{18}$$

$$E = \frac{\frac{5}{7} - \frac{5}{21}}{\frac{3}{4} + \frac{1}{6}} = \frac{\frac{15}{21} - \frac{5}{21}}{\frac{9}{12} + \frac{2}{12}} = \frac{\frac{10}{21}}{\frac{11}{12}} = \frac{10}{21} \times \frac{12}{11} = \frac{10 \times \cancel{3} \times 4}{\cancel{3} \times 7 \times 11} = \frac{40}{77}$$