

ES 1 - N5 Applications of Maths (Numeracy) Adding & Subtracting Fractions

Worked Solutions Courtesy of Mr R.Milton

$$\textcircled{1} \quad \frac{3}{5} \times \frac{3}{7} + \frac{2}{5} \times \frac{7}{7}$$

$$\frac{15}{35} + \frac{14}{35}$$

$$\frac{29}{35} \quad \checkmark$$

MAKE
DENOMINATORS
THE SAME

$$\textcircled{2} \quad \frac{2}{2} \times \frac{2}{3} + \frac{1}{2} \times \frac{3}{3}$$

$$\frac{4}{6} + \frac{3}{6}$$

$$\frac{7}{6} \quad \checkmark$$

$$\textcircled{3} \quad \frac{3}{3} \times \frac{3}{4} - \frac{2}{3} \times \frac{4}{4}$$

$$\frac{9}{12} - \frac{8}{12}$$

$$\frac{1}{12} \quad \checkmark$$

$$\textcircled{4} \quad \frac{9}{9} \times \frac{3}{1} - \frac{8}{9}$$

$$\frac{27}{9} - \frac{8}{9}$$

$$\underline{\frac{19}{9}} \quad \checkmark$$

$$\textcircled{5} \quad \frac{15}{15} \times \frac{1}{4} + \frac{20}{20} \times \frac{2}{3} + \frac{12}{12} \times \frac{4}{5}$$

$$\frac{15}{60} + \frac{40}{60} + \frac{48}{60}$$

$$= \underline{\frac{103}{60}} \quad \checkmark$$

$$\textcircled{6} \quad \frac{35}{35} \times \frac{5}{8} + \frac{56}{56} \times \frac{1}{5} + \frac{40}{40} \times \frac{2}{7}$$

$$\frac{175}{280} + \frac{56}{280} + \frac{80}{280} =$$

$$= \underline{\frac{311}{280}} \quad \checkmark$$

$$\left[8 \times 5 \times 7 \right] \\ = 280$$

$$\textcircled{7} \quad 1 - \left(\frac{1}{4} + \frac{3}{7} \right)$$

$$= \frac{1}{1} - \frac{1}{4} - \frac{3}{7}$$

$$= \frac{1}{1} \times \left(\frac{28}{28} \right) - \frac{1}{4} \times \left(\frac{7}{7} \right) - \frac{3}{7} \times \left(\frac{4}{4} \right)$$

$$= \frac{28}{28} - \frac{7}{28} - \frac{12}{28}$$

$$= \underline{\frac{9}{28}} \quad \checkmark$$

$$\textcircled{8} \quad 2 - \left(\frac{6}{7} + \frac{1}{3} \right) = \frac{2}{1} - \frac{6}{7} - \frac{1}{3}$$

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

$$= \frac{42}{21} - \frac{18}{21} - \frac{7}{21} = \underline{\frac{17}{21}} \quad \checkmark$$

$$\textcircled{9} \quad 4 - \left(\frac{5}{6} + \frac{3}{4} \right)$$

$$\frac{4}{1} - \frac{5}{6} - \frac{3}{4}$$

$$\frac{4}{1} \times \frac{24}{24} - \frac{5}{6} \times \frac{4}{4} - \frac{3}{4} \times \frac{6}{6}$$

$$\frac{96}{24} - \frac{20}{24} - \frac{18}{24}$$

$$\frac{58}{24} = \frac{29}{12} \quad \checkmark$$

$$\textcircled{10} \quad \frac{2}{1} \times \frac{54}{54} - \frac{1}{2} \times \frac{27}{27} - \frac{2}{3} \times \frac{18}{18} - \frac{1}{9} \times \frac{6}{6}$$

$$\frac{108}{54} - \frac{27}{54} - \frac{36}{54} - \frac{6}{54}$$

$$\frac{39}{54} = \frac{13}{18} \quad \checkmark$$

A. Q.

$$\left(\frac{7}{7}\right) \times \frac{1}{5} + \frac{3}{7} \times \left(\frac{5}{5}\right)$$

$$\frac{7}{35} + \frac{315}{35}$$

$$\frac{22}{35}$$

$$\text{FRACTION MOTTLED} = 1 - \frac{22}{35}$$

$$= \frac{35}{35} - \frac{22}{35}$$

$$= \underline{\frac{13}{35}} \quad \checkmark$$