



## Grade 8 - Mathematics

### Focus on Fractions 5

#### Memo



Calculate the following:

$$1. \left(\frac{1}{3}\right)^3 + 30\% \text{ of } 65 + \sqrt{\frac{16}{4}} \times \frac{1}{3^2}$$

$$\begin{aligned} &= \frac{1}{9} + \left(\frac{30}{100} \times \frac{65}{1}\right) + \left(\frac{4}{2} \times \frac{1}{9}\right) \\ &= \frac{1}{9} + \left(\frac{3}{10} \times \frac{65}{1}\right) + \left(\frac{2}{1} \times \frac{1}{9}\right) \\ &= \frac{1}{9} + \left(\frac{3}{2} \times \frac{65}{1}\right) + \frac{2}{9} \\ &= \frac{1}{9} + \frac{195}{2} + \frac{2}{9} \\ &= \frac{2}{18} + 97\frac{9}{18} + \frac{4}{18} \\ &= 97\frac{15}{18} \\ &= 97\frac{5}{6} \end{aligned}$$

$$2. 20\% \text{ of } 70 + 60\% \text{ of } 200 - \frac{30\% \text{ of } 40}{16\% \text{ of } 45}$$

$$\begin{aligned} &= \left(\frac{20}{100} \times \frac{70}{1}\right) + \left(\frac{60}{100} \times \frac{200}{1}\right) - \frac{\frac{30}{100} \times \frac{40}{1}}{\frac{16}{100} \times \frac{45}{1}} \\ &= (2 \times 7) + (6 \times 2) + \frac{3 \times 4}{\frac{8}{50} \times \frac{45}{1}} \\ &= 14 + 12 + \frac{12}{\frac{8}{10} \times \frac{9}{1}} \\ &= 26 + \frac{12}{\frac{4}{5} \times \frac{9}{1}} \\ &= 26 + \frac{12}{\frac{36}{5}} \\ &= 26 + 12 \times \frac{5}{36} \end{aligned}$$



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$$\begin{aligned} &= 26 + \frac{5}{3} \\ &= 26 + 1\frac{2}{3} \\ &= 27\frac{2}{3} \end{aligned}$$

$$\begin{aligned} 3. \quad &\frac{3}{4} + \sqrt{16} + 20\% \text{ of } \frac{21}{40} \times \frac{2}{3} \\ &= \frac{3}{4} + 4 + \frac{20}{100} \times \frac{21}{40} \times \frac{2}{3} \\ &= 4\frac{3}{4} + \frac{2}{10} \times \frac{21}{40} \times \frac{2}{3} \\ &= 4\frac{3}{4} + \frac{1}{5} \times \frac{21}{40} \times \frac{2}{3} \\ &= 4\frac{3}{4} + \frac{21}{200} \times \frac{2}{3} \\ &= 4\frac{3}{4} + \frac{7}{100} \\ &= 4\frac{75}{100} + \frac{7}{100} \\ &= 4\frac{82}{100} \\ &= 4\frac{41}{50} \end{aligned}$$

$$\begin{aligned} 4. \quad &\left(\frac{2}{4}\right)^2 \times \frac{8}{16} + 40\% \text{ of } 40 \\ &= \frac{4}{16} \times \frac{8}{16} + \frac{40}{100} \times \frac{40}{1} \\ &= \frac{1}{2} \times \frac{1}{4} + \frac{4}{1} \times \frac{4}{1} \\ &= \frac{1}{8} + \frac{16}{1} \\ &= \frac{1}{8} + 16 \\ &= 16\frac{1}{8} \end{aligned}$$



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