Exercice 1 **Donner le résultat en fraction irréductible :**

$$A = 4 - \frac{16}{7} \times \frac{5}{12} = 4 - \frac{4 \times \cancel{4} \times 5}{7 \times \cancel{4} \times 3} = 4 - \frac{20}{21} = \frac{84}{21} - \frac{20}{21} = \boxed{\frac{64}{21}}$$

$$B = \frac{\frac{7}{2} - \frac{5}{3}}{2 \times \frac{7}{5}} = \frac{\frac{21}{6} - \frac{10}{6}}{\frac{14}{5}} = \frac{\frac{11}{6}}{\frac{14}{5}} = \frac{11}{6} \div \frac{14}{5} = \frac{11}{6} \times \frac{5}{14} = \boxed{\frac{55}{84}}$$

$$C = \frac{\frac{3}{5} - 4}{\frac{7}{10}} = \frac{\frac{3}{5} - \frac{20}{5}}{\frac{7}{10}} = \frac{\frac{-17}{5}}{\frac{7}{10}} = \frac{-17}{5} \div \frac{7}{10} = \frac{-17}{5} \times \frac{10}{7} = \frac{-17 \times \cancel{5} \times 2}{\cancel{5} \times 7} = \boxed{\frac{-34}{7}}$$

$$D = 1 - \left(\frac{1}{2} + \frac{4}{3}\right)^2 = 1 - \left(\frac{3}{6} + \frac{8}{6}\right)^2 = 1 - \left(\frac{11}{6}\right)^2 = 1 - \frac{121}{36} = \frac{36 - 121}{36} = \boxed{\frac{-85}{36}}$$

$$E = 3 \times \left(3 - \frac{7}{3}\right)^2 = 3 \times \left(\frac{9}{3} - \frac{7}{3}\right)^2 = 3 \times \left(\frac{2}{3}\right)^2 = 3 \times \frac{4}{9} = \frac{3 \times 4}{3 \times 3} = \boxed{\frac{4}{3}}$$

Exercice 2 **Développer et réduire :**

$$A = (7x - 1)^2 = \boxed{49x^2 - 14x + 1}$$

$$B = \left(\frac{2}{3}x - 3\right)^2 = \left(\frac{2}{3}x\right)^2 - 2 \times \frac{2}{3}x \times 3 + 3^2 = \boxed{\frac{4}{9}x^2 - 4x + 9}$$

$$C = 3(2 + 6x)^2 = 3(4 + 24x + 36x^2) = 12 + 72x + 108x^2 = \boxed{108x^2 + 72x + 12}$$

$$D = 4 - (3 - 5x)^2 = 4 - (9 - 30x + 25x^2) = 4 - 9 + 30x - 25x^2 = \boxed{-25x^2 + 30x - 5}$$

$$E = 2 - 5(x + 7)(x - 2) = 2 - 5(x^2 - 2x + 7x - 14) = 2 - 5(x^2 + 5x - 14) = 2 - 5x^2 - 25x + 70 = \boxed{-5x^2 - 25x + 72}$$

$$F = 4 - (2 - x)(5 - 3x) = 4 - (10 - 6x - 5x + 3x^2) = 4 - (10 - 11x + 3x^2) = 4 - 10 + 11x - 3x^2 = \boxed{-3x^2 + 11x - 6}$$

$$G = \left(2 - \frac{3}{2}x\right)(-2 + 5x) = -4 + 10x + 3x - \frac{15}{2}x^2 = \boxed{-\frac{15}{2}x^2 + 13x - 4}$$