

Q1)

Formative assessment (Foundation) Answers

Mixed: $1\frac{1}{2}$ Proper: $\frac{1}{2}$ Improper: $\frac{3}{2}$

$$Q2) \frac{4}{3} \times \frac{2}{5} \rightarrow \frac{8}{15}$$

$$Q3) \frac{2}{4} \times \frac{1}{5} \rightarrow \frac{1}{10}$$

$$Q4) \frac{5}{6} \div \frac{1}{2} \text{ i.e. } \frac{5}{\cancel{6}_3} \times \frac{2}{1} \rightarrow \frac{5}{3}$$

$$Q5) \frac{7}{8} \div \frac{3}{2} \text{ i.e. } \frac{7}{\cancel{8}_4} \times \frac{2}{3} \rightarrow \frac{7}{12}$$

$$Q6) 1\frac{1}{2} + 3\frac{1}{4}$$

$$= \frac{2+1}{2} + \frac{12+1}{4} = \frac{3}{2} + \frac{13}{4} = \frac{(2 \times 3) + (1 \times 13)}{4} = \frac{6+13}{4} = \frac{19}{4} = 4\frac{3}{4}$$

$$Q7) 5\frac{1}{3} + 6\frac{2}{3}$$

$$= \frac{15+1}{3} + \frac{18+2}{3} = \frac{16}{3} + \frac{20}{3} = \frac{36}{3} = 12$$

$$Q8) 4\frac{5}{6} + 3\frac{1}{3} = \frac{24+5}{6} + \frac{9+1}{3} = \frac{29}{6} + \frac{10}{3} = \frac{(1 \times 29) + (2 \times 10)}{6} = \frac{29+20}{6}$$

$$= \frac{49}{6} = 8\frac{1}{6}$$

$$Q9) 9\frac{1}{10} - 1\frac{1}{2}$$

$$= \frac{90+1}{10} - \frac{2+1}{2} = \frac{91}{10} - \frac{3}{2} = \frac{(1 \times 91) - (5 \times 3)}{10} = \frac{91-15}{10} = \frac{76}{10} = 7\frac{6}{10} = 7\frac{3}{5}$$

$$Q10) x^3 \times x^5 \times x^2 = x^{10}$$

$$Q11) \frac{x^6 \times x^3 \times x}{x} = \frac{x^{10}}{x} = x^9$$

$$Q12) \sqrt{x^7 \times x^3} = \sqrt{x^{10}} = x^{10/2} = x^5$$

$$Q13) (x^3 \times x)^4 = (x^4)^4 = x^{16}$$

$$Q14) \frac{(2x^3)^5}{x} = \frac{32x^{15}}{x} = 32x^{14}$$

$$Q15) x^2(x^4 + 2x + 1) = x^6 + 2x^3 + x^2$$

$$Q16) x^4(4x^2 + 2x - y^2 + 5) = 4x^6 + 2x^5 - x^4y^2 + 5x^4$$

$$Q17) (x^2 + 5)(x^3 - 1) = x^5 - x^2 + 5x^3 - 5$$

$$Q18) 2(x-1) + x^3(x+5) - x + 1$$

$$= 2x - 2 + x^4 + 5x^3 - x + 1$$

$$= x^4 + 5x^3 + x - 1$$

$$Q19) 5x^3y^2 - 15x^2y^2 = 5x^2y^2(x-3)$$

$$Q20) x^2 + 11x + 24 = (x+3)(x+8)$$

$$Q21) x^2 + 4x - 5 = (x+5)(x-1)$$