

Final review

$$12) f(x) = -4x + 2 ; g(x) = x^2 + 3x ; h(x) = -5 ; k(x) = \sqrt{x+1}$$

$$\begin{aligned} a) f(3) &= -4(3) + 2 \\ &= -12 + 2 \\ &= -10 \end{aligned}$$

$$\begin{aligned} b) g(3) &= 3^2 + 3(3) \\ &= 9 + 9 \\ &= 18 \end{aligned}$$

$$c) h(3) = -5$$

$$\begin{aligned} d) k(3) &= \sqrt{3+1} \\ &= \sqrt{4} \\ &= 2 \end{aligned}$$

$$\begin{aligned} e) f(-2) &= -4(-2) + 2 \\ &= 8 + 2 \\ &= 10 \end{aligned}$$

$$\begin{aligned} f) g(-4) &= (-4)^2 + 3(-4) \\ &= 16 - 12 \\ &= 4 \end{aligned}$$

$$g) h(0) = -5$$

$$\begin{aligned} h) k(-1) &= \sqrt{-1+1} \\ &= \sqrt{0} \\ &= 0 \end{aligned}$$

$$\begin{aligned} i) f(x-3) &= -4(x-3) + 2 \\ &= -4x + 12 + 2 \\ &= -4x + 14 \end{aligned}$$

$$\begin{aligned} j) f(x+2) &= -4(x+2) + 2 \\ &= -4x - 8 + 2 \\ &= -4x - 6 \end{aligned}$$

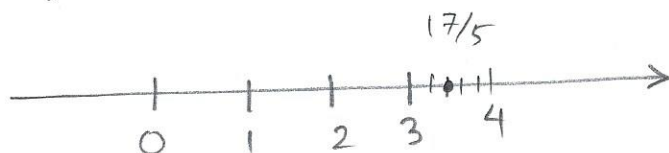
$$\begin{aligned} k) f(3x+1) &= -4(3x+1) + 2 \\ &= -12x - 4 + 2 \\ &= -12x - 2 \end{aligned}$$

unit 1 review

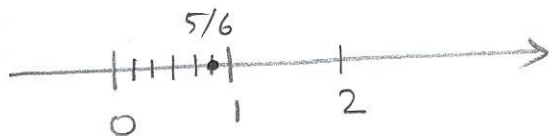
$$\begin{aligned} 13a) \quad 211 - 5^2(17-14) \\ = 211 - 5^2(3) \\ = 211 - 25(3) \\ = 211 - 75 \\ = 136 \end{aligned}$$

$$\begin{aligned} 13b) \quad 12 \cdot \sqrt{121} - 8(14-6) \\ = 12 \cdot \sqrt{121} - 8(8) \\ = 12(11) - 8(8) \\ = 132 - 64 \\ = 68 \end{aligned}$$

$$14a) \quad \frac{17}{5} = 3 \frac{2}{5}$$



$$14b) \quad \frac{5}{6}$$



$$15a) \quad \frac{226}{7} = 32 \frac{2}{7}$$

$$15b) \quad 84 \frac{5}{6} = \frac{84(6) + 5}{6} = \frac{509}{6}$$

$$16a) \quad \frac{21}{1} \cdot \frac{3}{7} = \frac{3 \cdot \cancel{7} \cdot 3}{1 \cdot \cancel{7}} = 9$$

$$16b) \quad \frac{24}{35} \cdot \frac{75}{36} = \frac{\cancel{2} \cdot \cancel{2} \cdot 2 \cdot \cancel{3} \cdot \cancel{5} \cdot \cancel{5} \cdot \cancel{3}}{\cancel{5} \cdot \cancel{7} \cdot \cancel{2} \cdot \cancel{2} \cdot \cancel{3} \cdot \cancel{3}} = \frac{10}{7}$$

$$17a) \frac{10}{12} \div \frac{7}{30}$$

$$= \frac{10}{12} \times \frac{30}{7}$$

$$= \frac{\cancel{2} \cdot 5 \cdot \cancel{2} \cdot \cancel{3} \cdot 5}{\cancel{2} \cdot \cancel{2} \cdot \cancel{3} \cdot 7}$$

$$= \frac{25}{7}$$

$$17b) \frac{\frac{3}{16}}{\frac{15}{4}}$$

$$= \frac{3}{16} \times \frac{4}{15}$$

$$= \frac{\cancel{3} \cdot \cancel{2} \cdot \cancel{2}}{2 \cdot 2 \cdot \cancel{2} \cdot \cancel{2} \cdot \cancel{3} \cdot 5}$$

$$= \frac{1}{20}$$

Unit 2 review

$$18a) \frac{4}{9} + \frac{7}{9} - \frac{5}{9} = \frac{6}{9} = \frac{2}{3}$$

$$18b) \frac{5}{12} + \frac{11}{12} - \frac{7}{12} = \frac{9}{12} = \frac{3}{4}$$

$$19) 24, 20, 15$$

$$24 = 2 \cdot 2 \cdot 2 \cdot 3$$

$$20 = 2 \cdot 2 \cdot 5$$

$$15 = 3 \cdot 5$$

$$\text{LCM} = 2 \cdot 2 \cdot 2 \cdot 3 \cdot 5 = 120$$

$$20a) \frac{5}{6} - \frac{3}{14}$$

$$= \frac{7}{7} \cdot \frac{5}{6} - \frac{3}{3} \cdot \frac{3}{14}$$

$$= \frac{35}{42} - \frac{9}{42}$$

$$= \frac{26}{42}$$

$$= \frac{13}{21}$$

$$21) \frac{11}{12} - \frac{1}{4} - \frac{1}{3}$$

$$= \frac{11}{12} - \frac{3}{12} - \frac{4}{12}$$

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

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

$$20b) \frac{1}{6} + \frac{3}{4} + \frac{1}{3}$$

$$= \frac{2}{2} \cdot \frac{1}{6} + \frac{3}{3} \cdot \frac{3}{4} + \frac{4}{4} \cdot \frac{1}{3}$$

$$= \frac{2}{12} + \frac{9}{12} + \frac{4}{12}$$

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

$$= \frac{5}{4}$$