

15. Expand and simplify each expression:

a. $(x + 2)(x - 1)(x + 4)$ b. $(2x^2 - 3x + 4)(x - 3)$ c. $(2x + 5)(x - 1)(x - 4)$

16. For each straight line equation below, identify its gradient.

a. $3x + 5y - 8 = 0$ b. $2x - 3y + 7 = 0$ c. $4x - 3y - 16 = 0$

17. Evaluate each of the following:

a. $1\frac{2}{7} \div 2\frac{2}{5}$ b. $3\frac{1}{3} \times (\frac{1}{4} + \frac{2}{3})$ c. $\frac{5}{6} - \frac{2}{5} \div 1\frac{3}{5}$

18. Fully factorise each expression:

a. $2x^2 - 18$ b. $x^2 - 5x - 6$ c. $2x^2 + 3x - 20$

19. A rocket travels 5.4×10^{19} km in one year.

Calculate its speed in km per hour. Give your answer in scientific notation.

20. Due to construction, a stadium had its capacity reduced by 15%. The maximum attendance during construction is 34 000.

Work out the capacity of the stadium after construction is complete.

21. Change the subject of the formula below to Q .

$$5P = \frac{4ab}{Q^2}$$