

1959

1. Divide  $2x^3 - 12x^2 + 18x - 4$  by  $2x - 4$ . Prove your answer when  $x = -1$ .

2. (a) Factorize : (i)  $x(2+x) - y(2+y)$ .

(ii)  $x^3 - 2 - x + 2x^2$ .

(b) Find the value of  $ma + mb + mc$  when  $m = 3.45$ ,  
 $a = 27.3$ ,  $b = 13.8$ ,  $c = 58.9$ .

3. Add together the third of  $x+2$ , the quarter of  $x-4$ , and the half of  $x+1$ .

If their sum equals  $2\frac{1}{3}$ , find the value of  $x$ .

4. (a) If  $m$  stands for any positive whole number, what does the expression  $(m+1)^2 - m^2$  stand for?

(b) Which is  $(x-3)(x+4) = x^2 + 2x - 6$ , an identity or a conditional equation?

Give the reason for your answer.

5. A and B travel towards each other from two places 54 miles apart, starting at the same time. They meet after 6 hours. If A travels twice as fast as B, how far apart were they after 4 hours?

6. (a) Solve the equation :

$$3 + \frac{x}{.5} = 7 - \frac{x}{.25}$$

(b) What values of  $x$  and  $y$  would make

$$\frac{5x+y}{5} = \frac{x-2y}{3} = x - 10?$$

7. A man walks  $x$  feet per second.

(a) How many minutes does he take to do a mile?

(b) How many miles would he do in  $y$  hours?

8. A margin  $x$  feet wide is cut all round a sheet of cardboard 6 yards long and 4 yards wide. If the area of the margin is known to be equal to 25 per cent. of the area of the whole sheet, write down an equation to show that.