

(b) Copy and complete the following table.

n	1	2	3	4	5
G_n					
R_n					
T_n					

(c) Find, in terms of n , an expression for

- (i) G_n , (ii) R_n , (iii) T_n .

(d) Calculate the values of

- (i) G_8 , (ii) R_{11} .

(e) Calculate the value of n if $T_n = 552$.

18. Let $x = \frac{t-1}{t+1}$ and $y = \frac{2t+1}{2t-3}$.

(a) Find the values of x and y when $t = \frac{3}{4}$. Express your answers as fractions.

(b) Express t in terms of

- (i) x , (ii) y .

(c) Hence or otherwise, express y in terms of x .

19. (a) Factorise the following.

- (i) $4x^2 - y^2$ (ii) $4x^2 + 4xy + y^2$

(b) Hence or otherwise, factorise

$$3(4x^2 - y^2) - 5(4x^2 + 4xy + y^2).$$

(c) Simplify $\frac{2}{x-3} - \frac{7}{x^2-6x+9}$.

20. Consider the formula $\frac{1}{r} = \frac{2}{p} + \frac{3}{q}$, where $r \neq 0$, $p \neq 0$ and $q \neq 0$.

(a) Calculate the value of r when $p = 3$ and $q = -5$.

(b) Make q the subject of the formula.

(c) If $p = \frac{3t+1}{t-1}$ and $r = \frac{t+1}{3t-1}$, express q in terms of t .