

Ex 2.1

Q2 Avg rate of change = Slope $[-2, 5]$ = $\frac{20-4}{5+3} = \frac{16}{8} = 2$.

Q4 $d(t) = \frac{-300}{(t+6)} + 50 \quad t \geq 0$

at $t=0$ $\frac{-300}{0+6} + 50 = -50 + 50 = 0$

at $t=10$ $\frac{-300}{10+6} + 50 = \frac{-75}{4} + 50 = \frac{125}{4} = 31.25$

Avg = $\frac{31.25-0}{10-0} = \frac{31.25}{10} = \frac{25}{8}$

Q6

Cube edge x cm.

(i) S.A. of 1 side = x^2
" of 6 sides = $6x^2$ cm²

(ii) at $x=2$ $6x^2 = 6(2)^2 = 24$ cm²
at $x=5$ $6x^2 = 6(5)^2 = 150$ cm²

Avg rate = $\frac{150-24}{5-2} = \frac{126}{3} = 42$ cm² per cm