

**79** If  $T = kx^{3/2}$  and  $T = 20$  when  $x = 4$ , then  $20 = k(4)^{3/2} \Rightarrow 20 = 8k \Rightarrow k = 2.5$ . The variation equation becomes  $T = 2.5x^{3/2}$ . When  $x = 16$ ,  $T = 2.5(16)^{3/2} = 2.5(64) = 160$ .