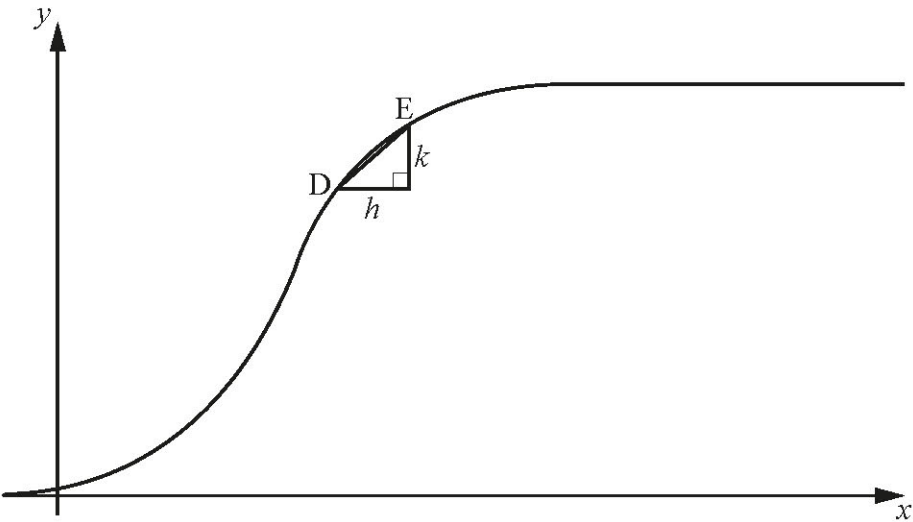


8 The diagram below shows the graph of y as a function of x .

Point D is the fixed point on the graph where $x = 10$.
Point E is the point on the graph where $x = 10 + h$ where h denotes a small increase in x .
The values of y at points D and E differ by k .

The value of the gradient of chord DE is $\frac{k}{h}$.



The screenshot below shows a spreadsheet used to find the gradient of DE for different values of h . The contents of some of the cells are not shown in the screenshot.

	A	B	C	D	E
1	h	$10+h$	y	k	gradient
2	1	11	1992.8	197.5937	197.594
3	0.1		1817.54	22.33784	
4	0.01	10.01	1797.46	2.259142	225.914
5	0.001	10.001	1795.43	0.226167	226.167
6	0.0001	10.0001	1795.22	0.022619	226.192
7	0.00001	10.00001	1795.2	0.002262	226.195
8					

- (a) Write down the value for cell B3. [1]
- (b) Find the value for cell E3. Give your answer to 3 decimal places. [1]
- (c) Deduce, to 1 decimal place, the value of the gradient of the graph at D. [1]