

20 $y = x^3 + 3x^2 - 13x$

(a) Find $\frac{dy}{dx}$.

..... [2]

(b) Find the gradient of the curve $y = x^3 + 3x^2 - 13x$ at the point where $x = 3$.

..... [2]

21 A dressmaker takes 75 hours to make 31 dresses.
In week 1, she takes a total of 12 hours 30 minutes to make the first 4 dresses.
In week 2, she makes the remaining 27 dresses at a constant hourly rate.

Work out the percentage increase in her hourly rate of making dresses from week 1 to week 2.

..... % [4]