Find the value of the gradient of the curve at a given point.

Cari nilai bagi kecerunan lengkung pada titik yang diberi.

(a) $y = 2x^3 - 3x + 2$ at point (0, 3) $y = 2x^3 - 3x + 2$ *pada titik (0, 3)*	(b) $y = \frac{15}{x}$ at point (2, 5) $y = \frac{15}{x}$ *pada titik (2, 5)*

Find the first derivative of each of the following at a given point.

Cari terbitan pertama bagi setiap yang berikut pada titik tertentu.

(a) $y = 2x^3 - 7$ at $x = -2$ $y = 2x^3 - 7$ *pada* $x = -2$	(b) $y = 8 - 3x^2$ at $x = 4$ $y = 8 - 3x^2$ *pada* $x = 4$

Find the value of $\frac{dy}{dx}$ with the given value of x.

Cari nilai $\frac{dy}{dx}$ *dengan keadaan nilai x diberi.*

(a) $y = \frac{1}{x^3}, x = 1$	(b) $y = 4x^2 - 5\sqrt{x} - \frac{1}{x}, x = 4$

Find the gradient of the curve $y = 3x^2 - 5x - 1$ at the point where the curve intersects the y-axis.

Cari kecerunan lengkung $y = 3x^2 - 5x - 1$ pada titik di mana lengkung menyilang pada paksi-y.

is.

The gradient of the curve $y = ax^2 + bx$ where a and b are constants, at points $x = 1$ and $x = 3$ are -2 and 10 respectively. Find the values of a and b.

Diberi kecerunan lengkung $y = ax^2 + bx$ dengan keadaan a dan b adalah pemalar, pada titik $x = 1$ dan $x = 3$ masing-masing adalah -2 dan 10. Cari nilai a dan b.

The gradient of the curve $y = ax - \frac{b}{x}$ at point $\left(\frac{1}{2}, -\frac{13}{2}\right)$ is 3. Find the values of the constants a and b.

Diberi kecerunan lengkung $y = ax - \frac{b}{x}$ pada titik $\left(\frac{1}{2}, -\frac{13}{2}\right)$ ialah 3. Cari nilai a dan b.

Given that $xy = 7$, find the value of $\frac{dy}{dx}$ when $x = 3$.

Diberi bahawa $xy = 7$, *cari nilai* $\frac{dy}{dx}$ *apabila* $x = 3$.

Find the gradient of the curve $y = 5x^2 - 8x + 3$ at the point where the curve intersects the y-axis.

Cari kecerunan lengkung $y = 5x^2 - 8x + 3$ *pada titik di mana lengkung menyilang paksi-y.*

Given $pV = 3600$, find the value of $\frac{dp}{dV}$ when $p = 40$.

Diberi $pV = 3600$, *cari nilai* $\frac{dp}{dV}$ *apabila* $p = 40$.

Find the gradient of the curve $y = \frac{5x-4}{x^2}$ at the point where the curve intersects the x-axis.

Cari kecerunan lengkung $y = \frac{5x-4}{x^2}$ *pada titik di mana lengkung menyilang paksi-x.*

Given $y = x^3 - 6x^2 + 9x + 5$, find the range of values of x for which $\frac{dy}{dx} > 0$.

Diberi $y = x^3 - 6x^2 + 9x + 5$, *cari julat bagi nilai* x *di mana* $\frac{dy}{dx} > 0$.

If $y = 2t + 5 + \frac{4}{5t-9}$, find the value of $\frac{dy}{dt}$ where $t = 2$.

Diberi $y = 2t + 5 + \frac{4}{5t-9}$, *cari nilai* $\frac{dy}{dt}$ *apabila* $t = 2$.

Find the gradient of the curve $y = \frac{24}{(3x-5)^2}$ at the point (2, 24).

Cari kecerunan lengkung $y = \frac{24}{(3x-5)^2}$ *pada titik (2, 24).*

Differentiate each of the following with respect to x.

Bezakan setiap yang berikut terhadap x.

(a) $\left(x^2 + \frac{3}{x}\right)^5$

(b) $\frac{2}{3\sqrt{2x^2-5}}$

is.

The curve $y = \frac{a}{2 + bx}$ passes through the point (1, 1) and the gradient at that point is $\frac{3}{5}$

Calculate the values of the constants a and b.

Diberi kecerunan bagi lengkung $y = \frac{a}{2 + bx}$ *yang melalui titik (1, 1) ialah* $\frac{3}{5}$. *Cari nilai pemalar a dan b.*

Given $y = (2x + 3)^5(x + 2)^8$, find the value of $\frac{dy}{dy}$ when $x = -1$.

Diberi $y = (2x + 3)^5(x + 2)^8$, *cari nilai* $\frac{dx}{dx}$ *apabila* $x = -1$.

Given $y = (x + 3)^4(x - 5)^7$, find $\frac{dy}{dx}$ and the values of x for which $\frac{dy}{dx} = 0$.

Diberi $y = (x + 3)^4(x - 5)^7$, *cari* $\frac{dy}{dx}$ *dan nilai bagi x apabila* $\frac{dy}{dx} = 0$.