WJEC June 2018 P1

Find $\frac{dy}{dx}$ for **each** of the following.

(a) $y = 5x^8 - 3x - 13 + x^{-1}$ [4]

(b) $y = x^{\frac{5}{6}}$ [1]

(c) $y = \frac{3}{x^6}$ [1]

WJEC June 2017 Q2

Find $\frac{dy}{dx}$ for **each** of the following.

(a) $y = 7x^{10} - 5x - 22$ [3]

(b) $y = x^{-12}$ [1]

(c) $y = x^{\frac{3}{8}}$ [1]

(d) $y = \frac{1}{x^4}$ [1]

WJEC June 2016 Q2

Find $\frac{dy}{dx}$ for each of the following.

(a) $y = 9x^4 + 4x^2 - 3$ [3]

(b) $y = x^{-8}$ [1]

(c) $y = x^{\frac{3}{4}}$ [1]

WJEC June 2015 Q3

Find $\frac{dy}{dx}$ for **each** of the following.

(a) $y = 5x^8 - 6x - 9$ [3]

(b) $y = x^{-8}$ [1]

(c) $y = x^{\frac{2}{5}}$ [1]

WJEC June 2014 Q1

Find $\frac{dy}{dx}$ for each of the following.

(a) $y = 6x^5 + 7x - 2$ [3]

(b) $y = \frac{1}{x^6}$ [1]

(c) $y = x^{\frac{5}{2}}$ [1]

WJEC June 2013 Q1

Find $\frac{dy}{dx}$ for **each** of the following.

(a) $y = 7x^5 - 5x - 2$

[3]

(b) $y = x^{-6}$

[1]

(c) $y = x^{\frac{3}{5}}$

[1]

WJEC June 2012 Q3

Find $\frac{dy}{dx}$ for each of the following.

(a) $y = 8x^7 + 2x - 23$

[3]

(b) $y = x^{-8}$

[1]

c) $y = x^{\frac{3}{2}}$

[1]

WJEC June 2011 Q2

Find $\frac{dy}{dx}$ for **each** of the following.

(a) $y = 8x^4 + 3x - 6$

(b) $y = x^{-4}$

(c) $y = x^{\frac{3}{4}}$

WJEC June 2018 P10

(a) Find $\frac{d^2y}{dx^2}$ when $y = 2x^{16}$. [2]

(b) Given the following facts, find the values of a, b, c and d.

- $y = ax^3 + bx^2 + cx + d$
- $\frac{dy}{dx} = 12x^2 + 4x + 1$
- When $x = 1$, $y = 10$. [4]

WJEC June 2017 Q8

(a) Find $\frac{d^2y}{dx^2}$ when $y = 3x^{20}$. [2]

(b) Given the following facts, find the values of a, b and c.

- $y = ax^4 + bx^3 + c$
- $\frac{dy}{dx} = 12x^3 + 6x^2$
- when $x = 0$, $y = -6$ [3]

WJEC June 2016 Q12a

(a) Find $\frac{d^2y}{dx^2}$ when $y = 3x^7 + 4x$. [2]

WJEC June 2015 Q8

(a) Find $\frac{d^2y}{dx^2}$ when $y = 2x^{10}$. [2]

.....

(b) Given the following facts, find the values of a, b and c.

- $y = ax^5 + bx + c$
- $\frac{d^2y}{dx^2} = 20x^3$
- when $x = 0$, $y = 5$
- when $x = 1$, $y = 9$ [3]

WJEC June 2014 Q12a

(a) Find $\frac{d^2y}{dx^2}$ when $y = 2x^6 + 3x$. [2]

WJEC June 2013 Q7a

(a) Find $\frac{d^2y}{dx^2}$ when $y = 6x^9$.

.....

[2]

WJEC June 2012 Q8a

(a) Find $\frac{d^2y}{dx^2}$ when $y = 6x^4 + 4x$.

[2]

WJEC June 2012 Q5

Use the facts below to find the value of the constant a.

$$y = ax^3$$

$$\frac{dy}{dx} = 135 \text{ when } x = 3$$

.....

[4]

WJEC June 2011 Q9a

(a) Find $\frac{d^2y}{dx^2}$ when $y = 5x^8$.

.....

[2]
