



WED
JULY
2011

Protinex
Balanced Nutrition with Power of Protein

8 am ① $x^3 - 3x^2 - 9x + 12$.

9 am Find the maximum & minimum values.

10 am
11 am Ans 1 - $f(x) = x^3 - 3x^2 - 9x + 12$

12 noon $\therefore x^3 - 3x^2 - 9x + 12$

1 pm ~~$f(x) = x^3 - 3x^2 - 9x + 12$~~

2 pm $f'(x) = 3x^2 - 6x - 9 = 0$,

3 pm $\Rightarrow x^2 - 2x - 3 = 0$

4 pm $\Rightarrow x^2 + x - 3x - 3 = 0$

5 pm $\Rightarrow (x+1)(x-3) = 0$

6 pm Eve. $\therefore x = 3$

$x = -1$

IMPORTANT NOTES

$\therefore f'(x) = x^2 - 2x - 3$

JULY
2011

F S S M T W T F S S M T W T F S S M T W T F S S M T W T F S S
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

8 am

9 am

10 am

11 am

12 noon

1 pm

2 pm

3 pm

4 pm

5 μm

6 pm

Eve.

IMPORTANT NOTES

AUG
2011

8 am

9 am

$$(-1, -1), (3, 8)$$

10 am

$$\text{slope} = m = \frac{y_2 - y_1}{x_2 - x_1}$$

11 am

$$x_2 - x_1$$

12 noon

$$= 8 - (-1)$$

1 pm

3 - (1)

2 μm

$$= \frac{8+1}{3+1} = \frac{9}{4}$$

3 pm

$$m = \frac{9}{4}$$

4 pm

5 μm

6 pm

Eve.

IMPORTANT NOTES

8 am

9 am

10 am

12 noon

1 μm

2 pm

~~JULY~~

2011

UN

| Year | Age | Gender | Occupation | Education | Income | Health | Family | Community | Environment | Policy | Outcome |
|------|-----|--------|------------|-------------|----------|--------|--------|-----------|-------------|------------|----------|
| 2000 | 25 | Male | Student | High School | \$10,000 | Good | 2 | Low | Urban | Pro-Health | Low Risk |
| 2001 | 26 | Male | Student | High School | \$10,000 | Good | 2 | Low | Urban | Pro-Health | Low Risk |
| 2002 | 27 | Male | Student | High School | \$10,000 | Good | 2 | Low | Urban | Pro-Health | Low Risk |
| 2003 | 28 | Male | Student | High School | \$10,000 | Good | 2 | Low | Urban | Pro-Health | Low Risk |
| 2004 | 29 | Male | Student | High School | \$10,000 | Good | 2 | Low | Urban | Pro-Health | Low Risk |
| 2005 | 30 | Male | Student | High School | \$10,000 | Good | 2 | Low | Urban | Pro-Health | Low Risk |
| 2006 | 31 | Male | Student | High School | \$10,000 | Good | 2 | Low | Urban | Pro-Health | Low Risk |
| 2007 | 32 | Male | Student | High School | \$10,000 | Good | 2 | Low | Urban | Pro-Health | Low Risk |
| 2008 | 33 | Male | Student | High School | \$10,000 | Good | 2 | Low | Urban | Pro-Health | Low Risk |
| 2009 | 34 | Male | Student | High School | \$10,000 | Good | 2 | Low | Urban | Pro-Health | Low Risk |
| 2010 | 35 | Male | Student | High School | \$10,000 | Good | 2 | Low | Urban | Pro-Health | Low Risk |
| 2011 | 36 | Male | Student | High School | \$10,000 | Good | 2 | Low | Urban | Pro-Health | Low Risk |
| 2012 | 37 | Male | Student | High School | \$10,000 | Good | 2 | Low | Urban | Pro-Health | Low Risk |
| 2013 | 38 | Male | Student | High School | \$10,000 | Good | 2 | Low | Urban | Pro-Health | Low Risk |
| 2014 | 39 | Male | Student | High School | \$10,000 | Good | 2 | Low | Urban | Pro-Health | Low Risk |
| 2015 | 40 | Male | Student | High School | \$10,000 | Good | 2 | Low | Urban | Pro-Health | Low Risk |
| 2016 | 41 | Male | Student | High School | \$10,000 | Good | 2 | Low | Urban | Pro-Health | Low Risk |
| 2017 | 42 | Male | Student | High School | \$10,000 | Good | 2 | Low | Urban | Pro-Health | Low Risk |
| 2018 | 43 | Male | Student | High School | \$10,000 | Good | 2 | Low | Urban | Pro-Health | Low Risk |
| 2019 | 44 | Male | Student | High School | \$10,000 | Good | 2 | Low | Urban | Pro-Health | Low Risk |
| 2020 | 45 | Male | Student | High School | \$10,000 | Good | 2 | Low | Urban | Pro-Health | Low Risk |
| 2021 | 46 | Male | Student | High School | \$10,000 | Good | 2 | Low | Urban | Pro-Health | Low Risk |
| 2022 | 47 | Male | Student | High School | \$10,000 | Good | 2 | Low | Urban | Pro-Health | Low Risk |
| 2023 | 48 | Male | Student | High School | \$10,000 | Good | 2 | Low | Urban | Pro-Health | Low Risk |
| 2024 | 49 | Male | Student | High School | \$10,000 | Good | 2 | Low | Urban | Pro-Health | Low Risk |
| 2025 | 50 | Male | Student | High School | \$10,000 | Good | 2 | Low | Urban | Pro-Health | Low Risk |
| 2026 | 51 | Male | Student | High School | \$10,000 | Good | 2 | Low | Urban | Pro-Health | Low Risk |
| 2027 | 52 | Male | Student | High School | \$10,000 | Good | 2 | Low | Urban | Pro-Health | Low Risk |
| 2028 | 53 | Male | Student | High School | \$10,000 | Good | 2 | Low | Urban | Pro-Health | Low Risk |
| 2029 | 54 | Male | Student | High School | \$10,000 | Good | 2 | Low | Urban | Pro-Health | Low Risk |
| 2030 | 55 | Male | Student | High School | \$10,000 | Good | 2 | Low | Urban | Pro-Health | Low Risk |
| 2031 | 56 | Male | Student | High School | \$10,000 | Good | 2 | Low | Urban | Pro-Health | Low Risk |
| 2032 | 57 | Male | Student | High School | \$10,000 | Good | 2 | Low | Urban | Pro-Health | Low Risk |
| 2033 | 58 | Male | Student | High School | \$10,000 | Good | 2 | Low | Urban | Pro-Health | Low Risk |
| 2034 | 59 | Male | Student | High School | \$10,000 | Good | 2 | Low | Urban | Pro-Health | Low Risk |
| 2035 | 60 | Male | Student | High School | \$10,000 | Good | 2 | Low | Urban | Pro-Health | Low Risk |
| 2036 | 61 | Male | Student | High School | \$10,000 | Good | 2 | Low | Urban | Pro-Health | Low Risk |
| 2037 | 62 | Male | Student | High School | \$10,000 | Good | 2 | Low | Urban | Pro-Health | Low Risk |
| 2038 | 63 | Male | Student | | | | | | | | |

IMPORTANT NOTES

$$w'_z = \frac{3}{(z-z)^2} = \frac{3}{z^2 + 4 - 4z}$$



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8 am
(3)

$$x(n) = 2n^3 + 6n^2 + 3n$$

9 am Find critical points & verify
10 am maxima or minima.

11 am $f(n) = 2n^3 + 6n^2 + 3n$

12 noon $f'(n) = 6n^2 + 12n + 3$

1 pm $\therefore \Rightarrow 6n^2 + 12n + 3 = 0$

2 pm $\Rightarrow 2n^2 + 4n + 1 = 0$

3 pm $\Rightarrow 2n^2$

4 pm

5 pm $a = 2, b = 4, c = 1$

6 pm
$$n = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

Eve.

$$= \frac{-4 \pm \sqrt{16 - 4(2)(1)}}{2(2)}$$

IMPORTANT NOTES

$$= \frac{-4 \pm \sqrt{16 - 8}}{4}$$

8 am

9 am

10 am

11 am

12 noon

1 pt

2 on

3 pr

4 pr

5 pm

6 di

Ev

IMPORTANT NOTES

$$= -0.70 < 0$$

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| M | T | W | T | F | S | S | M | T | W | T | F | S | S | M | T | W | T | F | S | S | M | T | W | T | F | S | S | M | T | W |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 |

$$x = -1.70 \Rightarrow \max x, \max$$

partial derivative.

$$\frac{\partial y}{\partial x_1} = 4x_1 + 2x_2 + 6 \quad \text{--- (1) 11 am}$$

$$\Rightarrow 2x_1 + x_2 = -3 \quad \text{--- (7) } 11 \text{ am}$$

$$\frac{\partial y}{\partial x_2} = 4x_2 + 2x_1 \sim \sim$$

$$\Rightarrow 2x_2 + x_1 = 0 \quad \dots (2)_{pm}$$

$$\boxed{x_1 = -2x_2}$$

Saling tawakal ① & ②.

$$2(-2x_2) + x_2 = -3$$

$$\Rightarrow -4x_2 + x_2 = -3,$$

$$\Rightarrow -3x_2 = -3$$

$$n_2 = 1$$

$$\therefore x_1 = -2(1) = -2.$$

$$x_1 = -2$$



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8 am $\frac{\partial y}{\partial x_1} = 4x_1 + 2x_2 + 6$

9 am

10 am $\frac{\partial^2 y}{\partial x_1^2} = 4 > 0$

11 am

12 noon $\frac{\partial y}{\partial x_2} = 4x_2 + 2x_1$

1 pm

2 pm $\frac{\partial^2 y}{\partial x_2^2} = 4 > 0$

3 pm

4 pm Both points holds ~~Symmetry~~

5 pm ~~Equation~~, positive.

6 pm So points $x_1 = -2$

Eve.

$x_2 = 1$

are minima points

IMPORTANT NOTES

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