

12-08-05 THUR

AP BINK p. 23-28 (10) D (14) C

P. 185 (46) b (48) a

$$\textcircled{10} \quad f'(x) = \frac{(x-1)(2x) - (x^2-1)(1)}{(x-1)^2}$$

$$f'(x) = \frac{2x^2 - 2x - x^2 + 1}{(x-1)^2}$$

$$f'(x) = \frac{x^2 - 2x + 1}{(x-1)^2}$$

$$f'(2) = \frac{2^2 - 2 \cdot 2 + 1}{(2-1)^2}$$

$$0 \approx 1$$

4.1

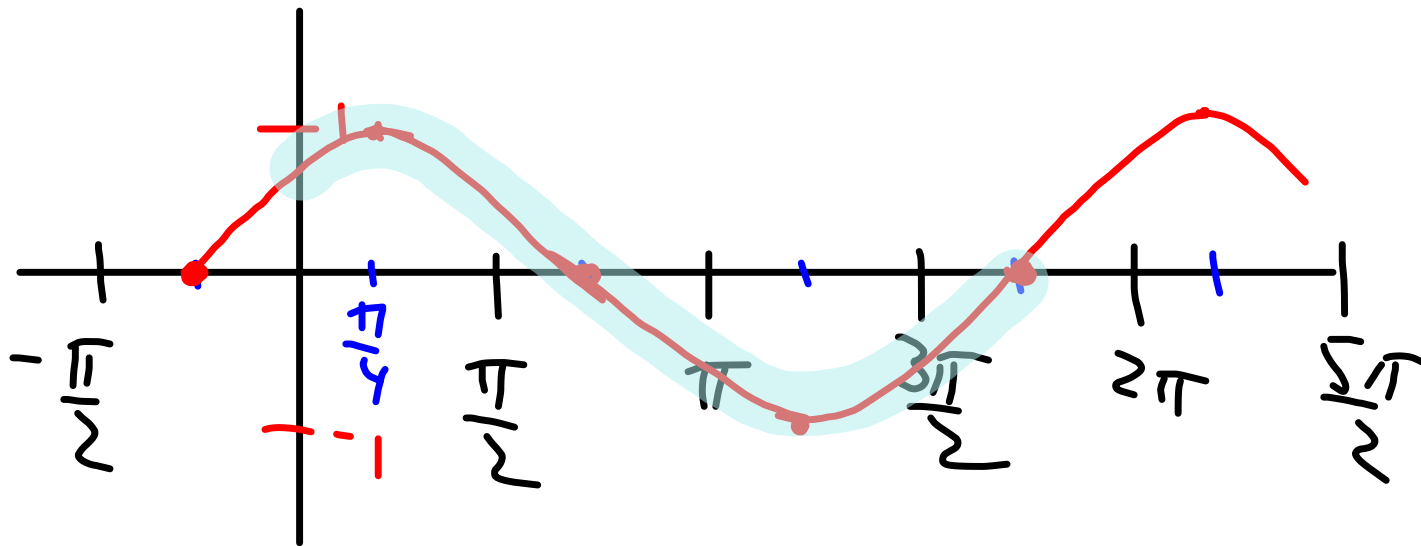
$$\textcircled{39} f'(x) = \frac{2}{3}(x-2)^{-\frac{1}{3}}$$

$$= \frac{2}{3\sqrt[3]{x-2}}$$

$$a) f'(2)$$

20

⑮ $y = \sin\left(x + \frac{\pi}{4}\right)$



AP Calculus Gift 4.2

1. What are points A, C, and G called?

ZEROS OF $h(x)$

X-INT. FOR $h(x)$

roots of $h(x)=0$

2. What occurs at point B?

REL. MIN.

LOCAL MIN. $h'(x)=0$

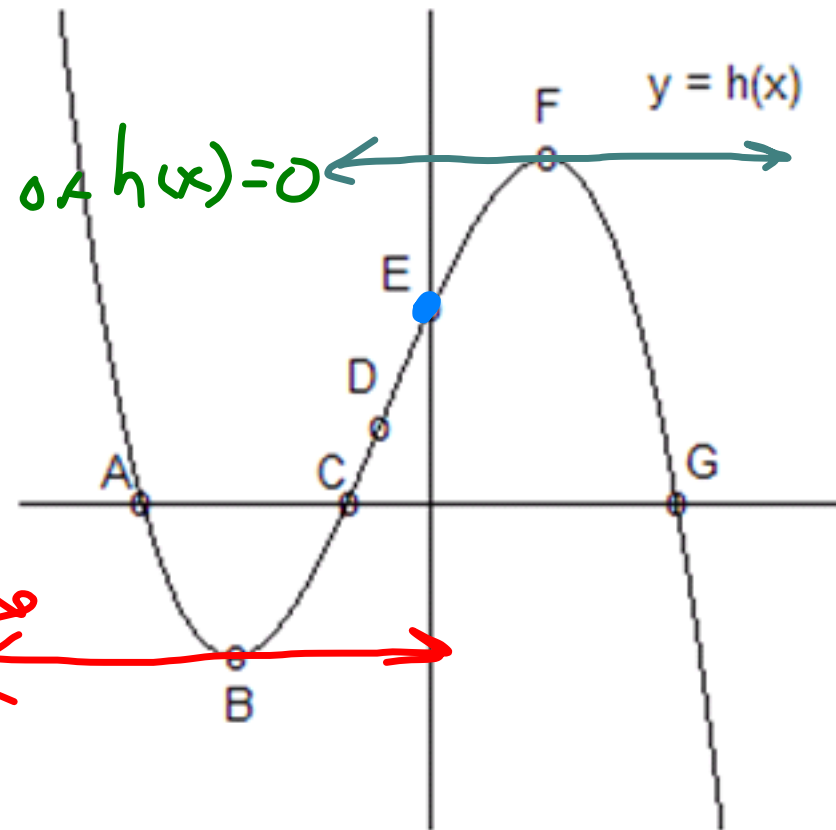
3. What occurs at point F?

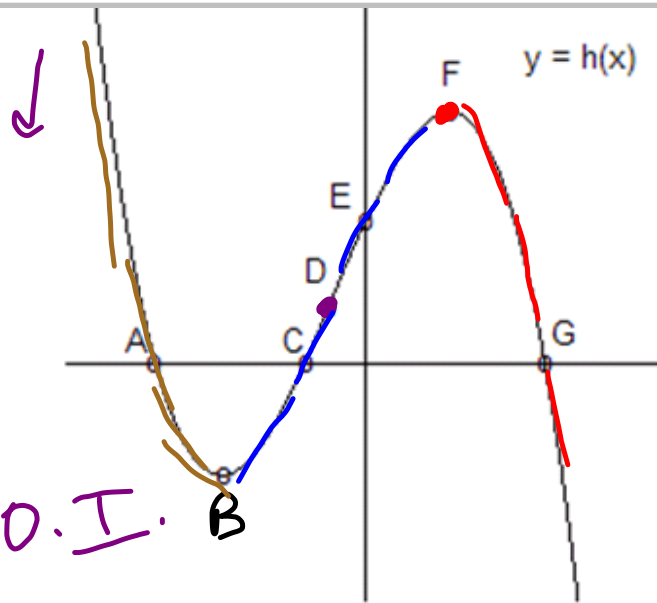
REL. MAX

LOCAL MAX $h'(x)=0$

4. What is point E called?

Y-INT ($x=0$)





5. What is point D called? P.O.I. **B**

6. Before point B, what is true about $h'(x)$? $h'(x)$ IS NEG;

about $h(x)$?

$h(x)$ IS DECREASING

$$h'(x) < 0$$

7. After point F, what is true about $h'(x)$? $h'(x)$ IS NEG

$$h'(x) < 0$$

about $h(x)$?

$h(x)$ IS DECREASING

$$h'(x) \text{ IS POS}$$

8. Between points B and F, what is true about $h'(x)$?

about $h(x)$? $h(x)$ IS INCREASING $h'(x) > 0$

Ex) For $f(x) = x^3 - 4x$.

ANALYTICALLY FIND:

a) WHERE f IS INCREASING (INC)

b) WHERE f IS DECREASING (DEC)

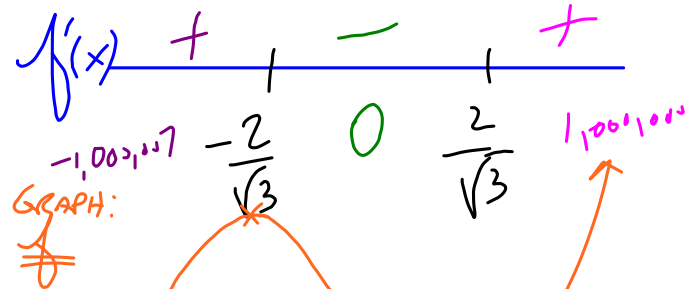
c) EXTREMA

SOLN: $f'(x) = 3x^2 - 4 = 0$

$$3x^2 = 4$$

$$x^2 = \frac{4}{3}$$

$$x = \pm \sqrt{\frac{4}{3}} = \pm \frac{2}{\sqrt{3}} = \pm \frac{2\sqrt{3}}{3}$$



f IS INC $x < -\frac{2}{\sqrt{3}}; x > \frac{2}{\sqrt{3}}$

f IS DEC $-\frac{2}{\sqrt{3}} < x < \frac{2}{\sqrt{3}}$

REL. MAX. $(-\frac{2}{\sqrt{3}}, 3.1)$ REL. MIN $(\frac{2}{\sqrt{3}}, -1)$

O.T.C.

· P. 192 1-13 (ODD), 26, 28

· READ p. 186-187 M.V.T.

· AP PINK #16