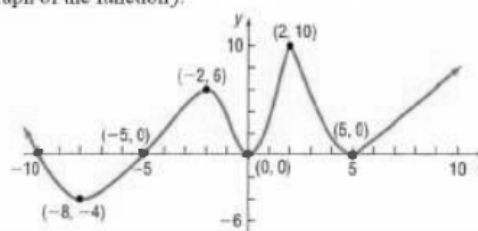


C) $f(x) = (x - 3)^2(x + 5)(x - 1)$

D) $f(x) = (x - 3)(5 - 6x)^3$

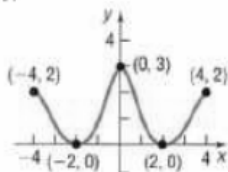
In problems 1-8, use the given graph of the function f .



1	Is f increasing on the interval $(-8, -2)$? Yes
2	Is f increasing on the interval $(2, 10)$? No
3	List the interval(s) on which f is increasing. Justify your answer. $(-8, -2), (0, 2), (5, 10)$
4	List the interval(s) on which f is decreasing. Justify your answer. $(-10, -8), (-2, 2), (2, 5)$
5	List the value(s) of x at which f has a local maximum. Justify your answer. $x = -2, 2$
6	List the value(s) of x at which f has a local minimum. Justify your answer. $x = -8, 0, 5$
7	Find the x -intercepts. $x = -10, -5, 0, 5$
8	Find the y -intercepts. $(0, 0)$

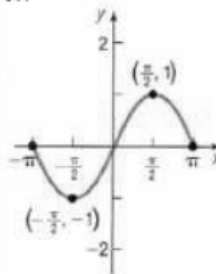
- (b) The x- and y- intercepts
- (c) The intervals of increase. Justify.
- (d) The intervals of decrease. Justify.
- (e) The intervals of constant. Justify.

9.



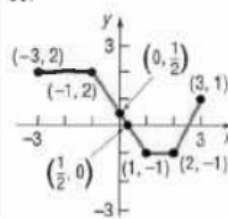
- b) x-intercept $x = -2, 2$ c) None
- Y-intercept $(0, 3)$
- c) Inc $(-2, 0)$ $(2, 4)$
- d) Dec $(-4, -2)$ $(0, 2)$

10.



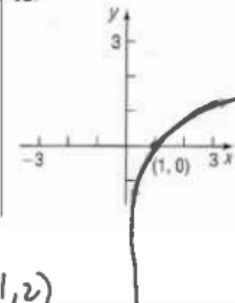
- b) x-int $-\pi, 0, \pi$
- Y-int $(0, 0)$
- c) Inc $(-\frac{\pi}{2}, \frac{\pi}{2})$
- d) Dec $(-\pi, -\frac{\pi}{2})$
- $(\frac{\pi}{2}, \pi)$
- e) None

11.



- X-intercepts $x = \frac{1}{2}, \frac{5}{2}$
- Y-intercept $(0, \frac{1}{2})$
- Inc $(2, 3)$
- Dec $(-1, 1)$
- constant $(-3, 1)$ $(1, 2)$

12.

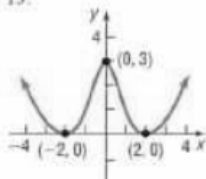


- X-int $x = 1$
- Y-int None
- Inc $(0, \infty)$
- Dec None
- Constant None

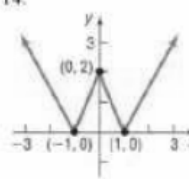
In problems 13-16, the graph of a function f is given. Use the graph to find:

- a) The numbers, if any, at which f has a local maximum. What are those local maxima?
- b) The numbers, if any, at which f has a local minimum. What are those local minima?

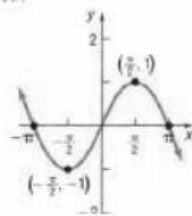
13.



14.



15.



16.

