

Answers Week in Review 8

1. a.) 1

b.) $-\frac{1}{6}$

c.) 0

d.) 0

e.) e

f.) e^4

g.) 1

h.) $\frac{1}{2}$

2. Problem 11 in text; answers provided in back of book. As for problem 12:

f increasing: $1 < x < 6$ and $x > 8$, f decreasing $0 < x < 1$, $6 < x < 8$, f local max at $x = 6$,
 f local min at $x = 1$ and $x = 8$, f concave up $0 < x < 2$, $3 < x < 5$ and $7 < x < 9$, f concave
down $2 < x < 3$ and $5 < x < 7$, f inflection point at $x = 3, 2, 5, 7$.

3. Graph not available

4. a.) critical numbers: $x = 0$ and $x = -3$ because the derivative is 0 at these points.

b.) critical numbers: $x = 0$ and $x = 8$ because the derivative is 0 at these points.

c.) critical numbers: $x = 0$, $x = 2$ (derivative does not exist) and $x = 1$ (derivative is 0).

d.) critical numbers: $x = 0$, $x = 1$ (derivative does not exist) and $x = 0.5$ (derivative is 0).

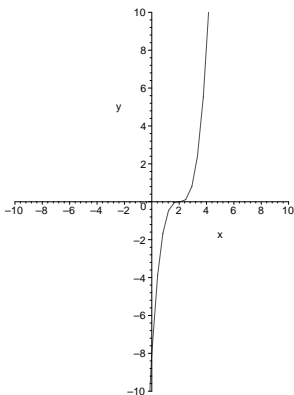
5. a.) absolute max: 4 ;absolute min: 0

b.) absolute max: 2; absolute min: none

6. a.) absolute max: 66; absolute min: -15

b.) absolute max: $\ln 27$; absolute min: 0

7. a.) graph (answer not unique)



b.) graph (answer not unique)

