

GEMS 100
 Test 1 Answers

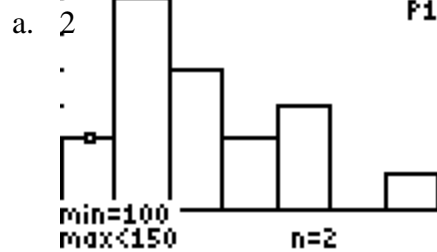
1. b
2. b
3. a
4. a
5. b
6. c
7. b
8. a
9. The y-intercept is at 4, there is no x-intercept, it is decreasing when $-4 < x < 0$ and increasing when $0 < x < 4$, it is concave up when $-4 < x < 4$.
10. (0.4, -2.8)
11. $f(2) = 14, f(5) = 32$.
12.
 - a. $1/3$
 - b. As foot length increases by 1", shoe size increases by 3.
 - c. 9"
 - d. 14

13. 0 if $x \leq 15,000$ and $0.15(x - 15,000)$ if $x > 15,000$

14.

- a. 1
- b. 7

15.



- b. Mean = 225.6, Median = 201, Standard Deviation = 76.3, $Q_1 = 166$, $Q_3 = 272$.

16.

- a. 4.2 minutes
- b. 3.75 minutes
- c. 1954