

MAT-120 – HW #17– Answers

Please select the correct answer number of each question. There are more answers than questions.
Answers may be repeated.

1)

$$P(x < 17) = P(z < -0.17) = 0.4325$$

2)

$$P(X) = 0.4328$$

3)

$$P(\bar{x} < 17) = P(z < -1.01) = 0.1562$$

4)

$$z = 1.64, n = 27$$

5)

$$T_{\alpha/2} = 1.6849$$

$$E = 1.6849 * (2.6) / \sqrt{40} = 0.69$$

$$11.91 < \mu < 13.29$$

We are 90% confident that the mean grading time of all composition papers is between 11.91 and 13.29 minutes.

6)

$$z = 1.96, n = 39 \text{ (because we round UP)}$$

7)

$$z = 2.00, n = 40 \text{ (because we round UP)}$$

8)

number of pages

9)

a best-selling novel

10)

The confidence interval, at 90% confidence level, provides sufficient evidence that the mean time English composition professors spend on grading term papers exceeds 11 minutes.

$11 < 11.91$ (11 lies outside of the confidence interval, below the lower end point)

11)

Yes, the interval does not contain the value 6.5 and $6.5 < 6.636$

12)

$T_{\alpha/2} = 1.8331$, $E = 0.504$,

13)

90%, 10, 0.504 lb

14)

(6.636 lbs, 7.644 lbs)

15)

Wider. The error (E) will be higher.