

Math 105: Partial Answers to Unit 3 Problem Set

1. (a) 43.5 (b) 41 (c) 46.5 (d) 19 (e) 5.5 (f) 32
2. (a) Mean, median, mode
(b) Interquartile range, range, standard deviation
(c) percentile, quartile, z-score
(d) mean, standard deviation, z-score
(e) interquartile range, median, quartile
(f) interquartile range, median, outlier, quartile, range
(g) interquartile range, median, mode, percentile, quartile,
3. (c) 86 (d) 84.5 (e) 67
4. (a) 49 (b) 53 (c) 25% (d) 50% (e) 15 (h) five # summary = 42, 51, 55, 60.5, 69
5. (a) 1; 70 (b) 1.5; 62 (c) John (d) no
6. (a) 970 (b) 30 (c) 1 (d) equal to (e) 910, 1030 (f) narrower and shifted right
7. (a) 6.1; 3.6 (b) 2.5; 9.7 (c) 55% (e) The percentages are not close to the 68-95-99.7 rule and the shape of the distribution is not symmetric bell-shaped.
8. (b) 81.5% (c) 30 (d) 500; 540 (e) 536 (f) 508
9. (a) Test 1: 81; 6.7 Test 2: 80.3; 15.0 (b) Test 1: .595, Test 2: .576 (c) Test 1 but not by much
10. (a) 30 (b) 75% (c) 80
- 11.
12. (b) -0.33333 (c) 84% (d) 98th (e) 50% (f) 100; 115 (g) 3520
13. (a) i. 84%, 1 ii. 97.5%, 2 (b) A→(95, 100]; B→(90, 95]; C→(80, 90]; D→(75, 80]; F→[0, 75]
(c) i. approx 87th ii. 87%
14. (a) ii. Clerical Sp & Acc iii. 45% (b) i. 16%; ii. 1235; iv. 90 v. 84th
15. (b) $z = -0.5$ (c) 97.5% (d) about 41 (e) 96 (f) 94.4 (g) less than (h) $-1/3$ (i) 85.5
16. (a) $\text{randint}(1, 43, 4)$ (b) 58 (c) no but close (d) normal with center at mean age of 43 yrs.
(e) the same; smaller
17. (a) C (b) C (c) A→Form 2; B→Form 1; C→Form 3 (d) 54; 78 (e) Janelle (f) Adrian
(g) Adrian (0.5), Janelle (-.6667), Leroy (-0.75), Brandon (-1.5)
18. Five Number Summaries are: A→ 4, 6, 7, 8, 10; B→ 4, 4, 7, 10, 10; C→6, 6, 7, 8, 8
19. (a) C (b) B (c) A (d) A