

Chapter 2 BLM Answers

BLM 2-2 Chapter 2 Warm-Up Section 2.1

- 51, 58, 62, 63, 67, 70, 72, 75; 67, 70, 72, 75 are in the upper half.
- 2
- a) Estimate: $n = 15$; Calculate: $n = 18$
b) Estimate: $n = 45$; Calculate: $n = 40.5$
c) Estimate: $n = 110$; Calculate: $n = 112.5$
-

| Size | Tally | Frequency |
|------|-------|-----------|
| 5 | | 2 |
| 6 | | 2 |
| 7 | | 3 |
| 8 | | 6 |
| 9 | | 3 |

5. a) $x = 2$ b) $y = 2$

Section 2.2

- size 8
- $n = 25$
- 47
- 2.1
- 72%

Section 2.3

- 12
- 60
- 23.5
- 62.4
- 55

BLM 2-3 Stem-and-Leaf Plots

- a) 5
b)

| Stem |
|------|
| 5 |
| 6 |
| 7 |
| 8 |
| 9 |

- c)

| Stem | Leaf |
|------|-------------|
| 5 | 9 7 0 |
| 6 | 8 5 1 0 9 4 |
| 7 | 7 0 7 0 |
| 8 | 2 7 0 |
| 9 | 0 1 |

- d)

| Stem | Leaf |
|------|-------------|
| 5 | 0 7 9 |
| 6 | 0 1 4 5 8 9 |
| 7 | 0 0 7 7 |
| 8 | 0 2 7 |
| 9 | 0 1 |

2. a) 31 b) 47; 1 c) 26 d) 26

3. a) 3

- b)

| Stem | Leaf |
|------|---------------------------------|
| 0 | 5 7 8 8 9 9 |
| 1 | 0 2 2 3 3 3 4 4 5 5 5 6 7 7 7 8 |
| 2 | 0 1 3 3 4 |

- c) 10-18 year olds d) 19 years
e) 13, 15, 17 f) 14

BLM 2-4 Section 2.1 Extra Practice

- a) mode = 47, median = 46.7, mean = 45.5
b) mode = 205, median = 203, mean = 205.7
c) mode = -5, median = -5, mean = -5
- a) mode = 31, median = 29.5
b) mode = 7, median = 7
- a) $n = 40$ b) $n = 40$
- a)

| Size | Frequency |
|------|-----------|
| 4 | 1 |
| 6 | 3 |
| 8 | 6 |
| 10 | 4 |
| 12 | 3 |
| 14 | 1 |

- b) Size 8
c) Yes. The mode shows the most popular size. It is also in the middle of the data set.

5. a)

| Stem (tens) | Leaf (ones) |
|-------------|---------------|
| 2 | 2 5 5 6 7 8 8 |
| 3 | 1 2 |

- b) 26 kg
c) 27.5 kg



6.

| Value, x | Weighting, w (%) | Product of Value and Weighting, wx |
|---------------|--------------------|--------------------------------------|
| 63 | 40 | $63 \times 0.4 = 25.2$ |
| 60 | 35 | $60 \times 0.35 = 21$ |
| 52 | 15 | $52 \times 0.15 = 7.8$ |
| 84 | 10 | $84 \times 0.1 = 8.4$ |
| Totals | 100 | 62.4 |

7. **a)** grade 9 **b)** grade 7: 10; grade 8: 12; grade 9: 9; grade 10: 11; grade 11: 12; grade 12: 11
c) Grade 8 should win because they collected the most containers per student.
8. 37 h
9. a) 83, 81
b) Gerard's average = 90; Mary's average = 86.5

BLM 2-5 Section 2.2 Extra Practice

1. **a)** range = 22; outliers are 31, 9
b) range = 14; outlier is -15
c) range = 13; outlier is 18
d) range = 1.5; outliers are 1.5, 3.0
2. **a)** mean = 20.5, trimmed mean = 20.6
b) mean = -5.5, trimmed mean = -4.9
c) mean = 9.4, trimmed mean = 8.9
d) mean = 2.21, trimmed mean = 2.2
3. **a)** 3
b) modes: 1.4, 1.5; median: 1.5; mean: 1.79
c) outlier: 4.1; The outlier should be removed because 4.1 lbs is not a typical weight, and it makes the average weight appear higher.
d) range: 0.9; median: 1.5; mean: 1.6
e) The median stayed the same; the mean decreased.
4. **a)** mean **b)** median **c)** trimmed mean
d) Example: The median represents the middle of the data set, so this is the best measure of central tendency to use in this case.
5. **a)** 50th = 19; 25th = 16; 75th = 21
b) 50th = 47; 25th = 41; 75th = 51
c) 50th = 15; 25th = 8; 75th = 21
d) 50th = 96; 25th = 88; 75th = 100.5
6. **a)** 50th = 24; 25th = 17; 75th = 33
b) 12 = 4th; 21 = 39th; 40 = 97th

7. **a)** 21 **b)** 33rd **c)** 89th **d)** 32
e) Glenn place third overall in the competition.

BLM 2-6 Section 2.3 Extra Practice

1. **a)** iv **b)** iii **c)** ii **d)** i
2. As time increases, the temperature decreases.
3. As the litres of gas pumped increases, the cost increases.
4. There is no trend.
5. **a)** As the temperature increases, the number of skaters increases.
b) There are very few skaters when the temperature is below -20°C . There are no skaters when the temperature is above 0°C .
6. **a)** As the number of icebergs sighted increases, the number of tourists visiting the chalet increases.
b) approximately 45 **c)** 10 or more
d) If the trend continues, you can extrapolate that about 60 tourists would visit the chalet if there were 15 icebergs sighted.

BLM 2-7 Chapter 2 Test

1. A
2. A
3. B
4. A
5. C
6. Caleb got his best scores on the project and the exam. These were worth more, so his weighted mean is higher than his mean. mean = 73%; weighted mean = 75.1%
7. **a)** mean = 6.9; median = 7.8; mode = 7.8 **b)** 7.3 **c)** 0.8 **d)** 7.8

