ML8 Chapter 9 Warm-Up Answers

BLM 9–3 Chapter 9 Warm-Up

Section 9.1

1. Estimates will vary, depending on the methods used. Examples:
a) Estimate: −1000; Calculate: −1040
b) Estimate: −10; Calculate: −10.6
2. a) +1 **b)** +104
3. −4.2 students
4. −16
5. a) The bar graph. Explanations will vary. Example: You can determine the number of books in each category and then add them. The circle graph gives you percentages instead of numbers.
b) The circle graph. Explanations will vary. Example: You can use the percentages on the circle graph to calculate what proportion of $100 to spend on each type of book. Using the bar graph would take more calculations.
6. $\square$ = 20
7. $\square$ = 0.575 or 0.58
8. 3 : 2
9. 0 : 5
10. 3 : 7

Section 9.2

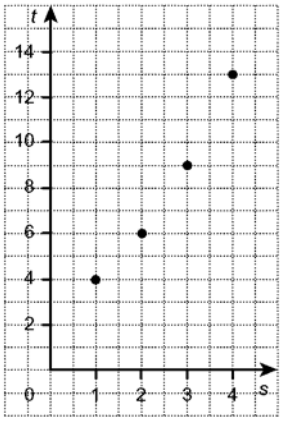
1. Answers will vary. Examples:
• The graph provides data on the cost of muffins. One muffin costs $0.75, two muffins cost $1.50, three muffins cost $2.25, ...
• The points appear to lie along a straight line.
• To move from one point to the next, you move one unit horizontally and 1.5 units vertically.
2.

Number of Muffins, *m*	1	2	3	4	5
Total Cost, *C* ($)	0.75	1.50	2.25	3.00	3.75

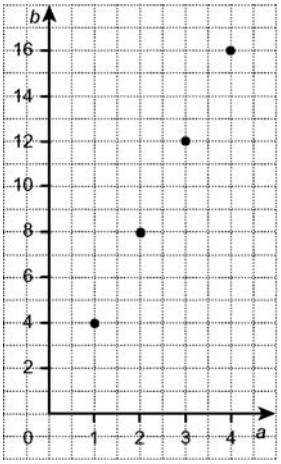
3. $6.00
4. No. You cannot buy part of a muffin.
5. $9.5^2 = 5.5^2 + b^2$
$90.25 = 30.25 + b^2$
$60 = b^2$
$7.75 \approx b$
The length of the unknown side is 7.75 m.
6. a) 25 **b)** 225 **c)** 625
7. a) 7 **b)** 11 **c)** 100
8. Answers may vary. Examples:
a) $10^2 = 100$ **b)** $8^2 = 64$
$11^2 = 121$ $9^2 = 81$
$\sqrt{108} \approx 10.4$ $\sqrt{77} \approx 8.7$
9. end of first month = 200 + 100 = 300
end of second month = 300 + 150 = 450
10. a) 1.2, 120% **b)** 1.15, 115%

Section 9.3

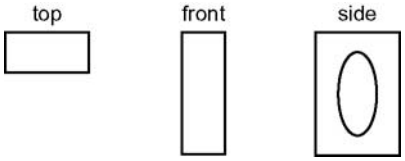
1. Table 1: Consecutive values of *s* differ by 1. Table 2: Consecutive values of *a* differ by 1. The consecutive values of the first variables differ by the same amount within each table.
2. Table 1: Values of *t* differ by 2, 3, and 4. The difference is not the same. Table 2: Values of *b* differ by 4. The difference is the same.
3. Table 1:



The relationship is not linear.
Table 2:



The relationship is linear.
4. Table 1: The difference in values of *t* is not the same and the relation is not linear.
Table 2: The difference in values of *b* is the same and the relation is linear.
5.



6. surface area of
top and bottom $\approx (3 \times 1^2) \times 2$
≈ 6
surface area of side $\approx (3 \times 2) \times 5$
≈ 30
The surface area is about 36 cm^2.

7. volume $\approx (3 \times 1^2) \times 5$
≈ 15
The volume is about 15 cm^3.
8. surface area of
triangular ends $\approx (2 \times 2 \div 2) \times 2$
≈ 4
surface area
of two sides $\approx 2 \times 5 \times 2$
≈ 20
surface area of bottom $\approx 2 \times 5$
≈ 10
The surface area is about 30 m^2.
9. volume $\approx (2 \times 2 \div 2) \times 5$
≈ 10
The volume is about 10 m^3.
10. a) volume of a
rectangular prism $\approx 5 \times 2 \times 2$
≈ 20
The volume is about 20 m^3.
b) Answers will vary. Example: The values are the same, but for the volume of a triangular prism, you multiply the height of the triangle (2.3 m), the base of the triangle (2 m), and the height of the triangular prism (4.5 m), and then divide by 2. You do not divide by 2 for the volume of a rectangular prism.