

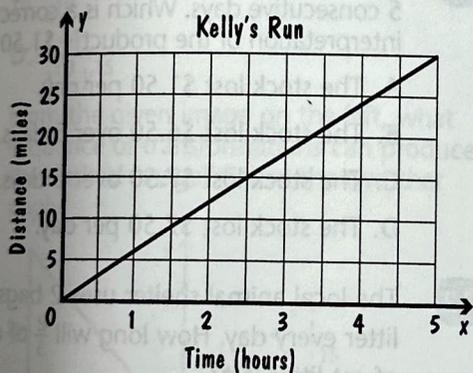
Part 1

Read each question. Select the correct answer.

- 1 Jacob deposited \$50.24 into his bank account after making an \$18.00 withdrawal to purchase books. Represent these situations as signed numbers.

- A. 50.24, 18.00
- B. -50.24, -18.00
- C. 50.24, -18.00
- D. -50.24, 18.00

- 2 The graph shows the proportional relationship between the time and distance Kelly ran. The proportional relationship between the time and distance Julia ran is modeled by the equation $y = 5.5x$, where y is the distance in miles, and x is the time in hours. Which of the following statements is true?



- A. Kelly ran faster; her unit rate is greater than Julia's.
- B. Julia ran faster; her unit rate is greater than Kelly's.
- C. Kelly ran faster; her unit rate is less than Julia's.
- D. Julia ran faster; her unit rate is less than Kelly's.

- 3 Paula spent \$84.29 at the store, Candice spent \$94.56, Dan spent \$83.79, and Eric spent \$95.06. Who spent the most money? Who spent the least money?

- A. Dan spent the most money, and Eric spent the least money.
- B. Candice spent the most money, and Paula spent the least money.
- C. Eric spent the most money, and Dan spent the least money.
- D. Paula spent the most money, and Candice spent the least money.

- 4 Which pair of number values for c and d have the following properties?

$$c < d; \quad |c| = |d|$$

- A. $c = -4$ and $d = 4$
- B. $c = 8$ and $d = 8$
- C. $c = -6$ and $d = -6$
- D. $c = 7$ and $d = -7$

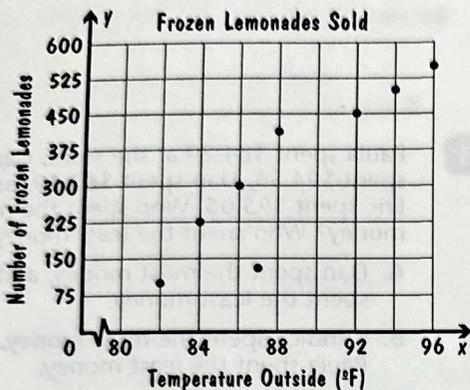
- 5 Convert $\frac{5}{8}$ to a decimal number. Enter your response in the gridded area on the answer sheet.

- 6 Which set of points represents a linear function?

- A. $(-5, -1)$, $(0, 5)$, and $(5, 10)$
- B. $(-3, -1)$, $(-1, 1)$, and $(1, 3)$
- C. $(0, 1)$, $(4, 5)$, and $(5, 4)$
- D. $(2, -1)$, $(5, 1)$, and $(7, 3)$

7

The scatter plot shows the relationship between the outside temperature and the number of frozen lemonades sold.



Which best describes the outlier of this scatter plot?

- When the temperature is 96°F, the number of frozen lemonades sold is 540.
- When the temperature is 92°F, the number of frozen lemonades sold is 450.
- When the temperature is 87°F, the number of frozen lemonades sold is 130.
- When the temperature is 82°F, the number of frozen lemonades sold is 100.

8

Which situation results in a total of 0?

- A scuba diver starts at 0 feet, travels -129 feet, and then travels 129 feet.
- Harlan deposits \$87.54 in her checking account, and then writes a check for \$78.54.
- The temperature is -2°C , and then increases 3°C .
- A player loses 60 points on his turn, then gains 75 points on his next turn.

9

Stacy goes for a walk. She walks $\frac{8}{5}$ miles to her friend's house. Then she walks back $\frac{4}{7}$ mile back to the park. Which expression could be used to find how far away from home Stacy is?

- $-\frac{8}{5} + (-\frac{4}{7})$
- $\frac{8}{5} + \frac{4}{7}$
- $\frac{8}{5} + (-\frac{4}{7})$
- $-\frac{8}{5} + \frac{4}{7}$

10

Which are equivalent expressions? Select the two that apply.

- $-\frac{2}{7} + (-\frac{6}{7})$
- $-\frac{2}{7} + (\frac{6}{7})$
- $\frac{2}{7} + (-\frac{6}{7})$
- $\frac{2}{7} + \frac{6}{7}$
- $\frac{7}{7} - \frac{2}{7}$
- $\frac{2}{7} - \frac{6}{7}$

11

A stock lost \$1.50 in value each day for 5 consecutive days. Which is a correct interpretation of the product -1.50×5 ?

- The stock lost \$1.50 per day.
- The stock lost \$6.50 over 5 days.
- The stock lost \$7.50 over 5 days.
- The stock lost \$7.50 per day.

12

The local animal shelter uses 2 bags of cat litter every day. How long will $\frac{2}{3}$ of a bag of cat litter last?

- 12 days
- 4 days
- $2\frac{1}{3}$ days
- $\frac{1}{3}$ day

13 Solve the system of equations.

$$\begin{aligned}x + 2y &= 10 \\ 3x + 5y &= 26\end{aligned}$$

- A. (4, 3)
- B. (7, 1)
- C. (6, 2)
- D. (2, 4)

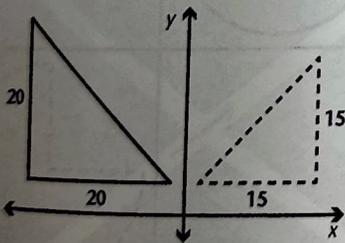
14 Charlie is renting a sailboat. The rental company charges \$60 for each rental, plus \$12 per hour. Charlie has \$108. Which inequality shows the number of hours, h , he can rent the sailboat?

- A. $h \geq 5$
- B. $h \leq 5$
- C. $h \geq 4$
- D. $h \leq 4$

15 Simplify $\left(\frac{x^2}{y^3}\right)^5$.

- A. $x^{10} y^{15}$
- B. $\frac{x^{10}}{y^{15}}$
- C. $\frac{y^{15}}{x^{10}}$
- D. $\frac{1}{x^{10} y^{15}}$

16 From the given image on the left, what sequence of transformations can produce the dashed image? Select the two that apply.

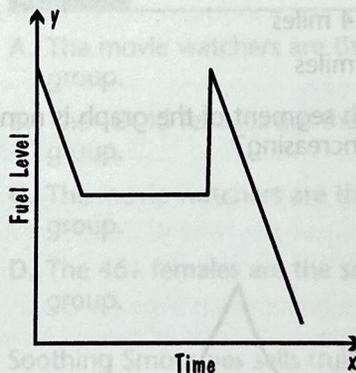


- A. A horizontal reflection and a dilation of scale factor 5.
- B. A horizontal reflection and a dilation of scale factor $\frac{3}{4}$.
- C. A 90° rotation counterclockwise about the origin, a translation on a diagonal and a dilation of scale factor 5.
- D. A 90° rotation counterclockwise about the origin, a translation on a diagonal and a dilation of scale factor $\frac{3}{4}$.

17 A scatter plot shows a linear association between absences from class (x) and overall grade (y). The equation is $y = -3.4x + 96$. Which **best** describes the meaning of the y -intercept and slope?

- A. The grade is 96 when there are no absences and increases by 3.4 points with each absence.
- B. The grade is 96 when there are no absences and decreases by 3.4 points with each absence.
- C. The grade is 3.4 when there are no absences and decreases by 96 points with each absence.
- D. The grade is 3.4 when there are no absences and increases by 96 points with each absence.

18 The graph shows the fuel level in Roger's car during the first day of his road trip. Which statement could describe Roger's day?



- A. Roger filled the tank, drove awhile, filled the tank, and drove some more.
- B. Roger drove awhile, stopped for a while, filled the tank, and drove some more.
- C. Roger drove awhile, filled the tank, drove some more, and filled the tank.
- D. Roger filled the tank, drove awhile, stopped for a while, and drove some more.

- 19 A tuxedo rental company charges \$75.40 per day to rent a tuxedo. Which equation shows the relationship between the cost c in dollars and the rental period d in days?

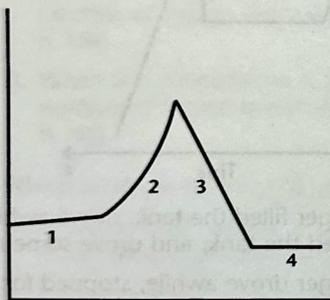
- A. $c = d - 75.40$
 B. $c = 75.40d$
 C. $c = 75.40 + d$
 D. $c = d \div 75.40$

- 20 On the weekend, Jane bikes to her friend's house and then they bike to the mall together. The table shows the distance from Jane's home as Jane and her friend bike together.

Time (minutes)	12	24	36	48	60
Distance from Home (mi)	9.4	11.8	14.2	16.6	19

How far is Jane's friend from her house?

- A. 0.74 mile
 B. 1.2 miles
 C. 2.4 miles
 D. 7 miles
- 21 Which segment of the graph is nonlinear and increasing?



- A. Segment 1
 B. Segment 2
 C. Segment 3
 D. Segment 4
- 22 Which real-world situation has a theoretical probability of 0.5?
- A. seeing the end of the movie before leaving the theater
 B. choosing a flavor of frozen yogurt from 14 flavors
 C. temperatures reaching 100°F in the desert in the summer
 D. deciding whether or not to mow the yard

- 23 Paul throws a standard die two times. What is the probability he gets a 3 on both throws?

- A. $\frac{2}{13}$
 B. $\frac{1}{36}$
 C. $\frac{4}{169}$
 D. $\frac{1}{1352}$

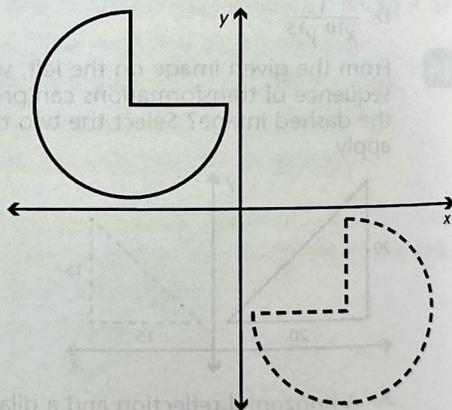
- 24 When you roll a die, which is a true statement about the probability of rolling a 6 compared to the probability of rolling a 1?

- A. $P(6) < P(1)$
 B. $P(6) > P(1)$
 C. Both probabilities equal 0.
 D. $P(6) = P(1)$

- 25 Two angles are complementary. One of the angles has a measure of 36° . What is the measure of the second angle?

- A. 36°
 B. 54°
 C. 126°
 D. 144°

- 26 Which sequence of transformations will transform the figure on the left to the image on the right?



- A. horizontal reflection and translation
 B. translation and rotation of 90° clockwise about the origin
 C. vertical reflection and rotation of 90° counterclockwise about the origin
 D. horizontal reflection and rotation of 180° counterclockwise about the origin

Part 2

Read each question. Select the correct answer. You may use a calculator on Part 2. 

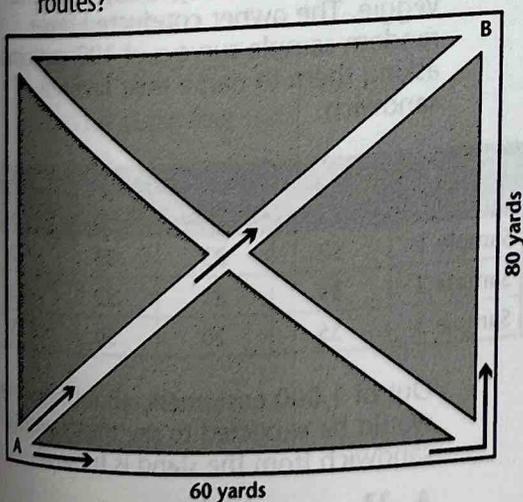
- 27 The table shows the number of people on a company's payroll for each of the last 9 months.

Month	1	2	3	4	5	6	7	8	9
Number of people	475	520	495	485	510	480	520	500	490

Which value best represents the data? Explain.

- A. The mean of 497.2 because there are no outliers.
 B. The median of 495 because half the numbers are above and half are below this number.
 C. The mode of 520 because this is the greatest number of people on the payroll.
 D. The mean, median, and mode all represent the data accurately.

- 28 The figure shows paths going around and through a park. Suppose you will walk from location A to location B by one of the indicated routes. What is the difference in length between the two routes?



- A. 20 yards
 B. 40 yards
 C. 100 yards
 D. 140 yards

- 29 On a coordinate grid, what is the distance between the points $(-9, 7)$ and $(6, -1)$? Round to the nearest whole number, if necessary.

- A. 4
 B. 5
 C. 13
 D. 17

- 30 The two-way table shows the results of a survey of females and their preference of a book or a movie. Which is a true statement?

Females	Movie	Book
18–45	24	66
46+	44	46

- A. The movie watchers are the largest group.
 B. The 18–45 females are the largest group.
 C. The movie watchers are the smallest group.
 D. The 46+ females are the smallest group.

- 31 Soothing Smoothies sells fruit smoothies for \$6 each, plus a \$10 delivery fee. An office pays a total of \$100 for a delivery of fruit smoothies. Use an equation to find how many fruit smoothies they ordered.

- A. 12 smoothies
 B. 13 smoothies
 C. 14 smoothies
 D. 15 smoothies

- 32 One cell has a diameter of 6×10^{-9} meter. Another cell has a diameter of 1.5×10^{-10} meter. Approximately how many times larger is the first cell than the second cell?

- A. 35
 B. 40
 C. 45
 D. 50

- 33** At camp, Maya uses 512 cubic centimeters of clay to make a cube. What is the side length of the cube?
- 64 centimeters
 - 8 centimeters
 - 8 centimeters
 - 64 centimeters

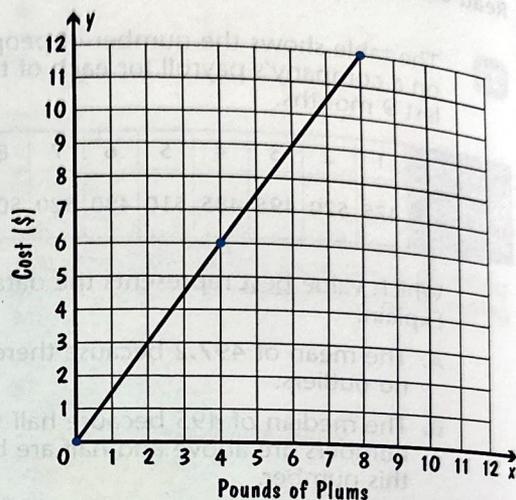
- 34** Which is the better buy?
- 10-pound bag of soil for \$13.60 per bag
25-pound bag of soil for \$33.50 per bag
- The 10-pound bag which has a unit rate of \$1.34 per pound
 - The 10-pound bag which has a unit rate of \$1.36 per pound
 - The 25-pound bag which has a unit rate of \$1.34 per pound
 - The 25-pound bag which has a unit rate of \$1.36 per pound

- 35** What valid conclusion can you draw from the data in this table?

Hours x	12	15	22
Dollars Earned y	137.40	177.00	266.20

- The relationship is not proportional because the ratio of dollars earned to hours is 11.45.
- The relationship is proportional because the ratio of dollars earned to hours is 11.80.
- The relationship is proportional because the ratio of dollars earned to hours is 12.10.
- The relationship is not proportional because the ratio of dollars earned to hours is not constant.

- 36** Tell whether the relationship is a proportional relationship. If so, give the constant of proportionality.



- The relationship is proportional with a constant of proportionality of 1.25.
- The relationship is proportional with a constant of proportionality of 1.5.
- The relationship is proportional with a constant of proportionality of 1.75.
- The relationship is not proportional.

- 37** A concession stand owner sells four kinds of sandwiches: Turkey, Beef, Ham, and Veggie. The owner conducted three random-sample surveys of 100 customers, asking them to name their favorite sandwich.

Favorite Sandwich	Turkey	Beef	Ham	Veggie
Sample 1	32	23	33	12
Sample 2	34	21	32	13
Sample 3	35	20	30	15

Out of 1,000 customers, about how many would be expected to say their favorite sandwich from the stand is turkey?

- 33
- 34
- 335
- 337

38

The heights of two groups of tomato plants were measured in inches. The mean height of group A is 28 inches and the MAD is 7.2. The mean height for group B is 36 inches and the MAD is 5.3. Which of the following is an accurate comparison of the populations?

- A. The typical height is greater for group B, and the variation is greater for group A.
- B. The typical height is greater for group B, and the variation is greater for group B.
- C. The typical height is greater for group A, and the variation is the same for both groups.
- D. The typical height and the variation are similar for both groups.

39

What is the area of a circle that has a diameter of 9 centimeters? Use 3.14 for π .

- A. 14.13 square centimeters
- B. 28.26 square centimeters
- C. 63.59 square centimeters
- D. 254.34 square centimeters

40

A metal trunk is the shape of a rectangular prism. Its length is 4.5 feet, its width is 2.25 feet, and its height is 1.75 feet. What is the volume of the trunk bed, rounded to the nearest tenth?

- A. 8.5 cubic feet
- B. 11.9 cubic feet
- C. 17.7 cubic feet
- D. 21.9 cubic feet

20. B. Use the Pythagorean theorem. $60^2 + 25^2 = c^2$
so $4,225 = c^2$ and $65 = c$. 8.G.7
21. C. Use the Pythagorean theorem. $5^2 + 6^2 = c^2$ so
 $61 = c^2$ and $7.8 \approx c$. 8.G.8

Practice Test

Level D

Part 1

1. C. A deposit of \$50.24 will increase the account balance and is represented as a positive number. An \$18 withdrawal will decrease the account balance and is represented as a negative number. 6.NS.5
2. A. Julia's unit rate is 5.5. To find Kelly's unit rate, divide the y -coordinate by the x -coordinate for a point on the line; $\frac{30}{5} = 6$. Since Kelly's unit rate is greater, Kelly ran faster. 8.EE.5
3. C. Order the numbers from greatest to least; Eric (\$95.06), Candice (\$94.56), Paula (84.29), Dan (\$83.79). 6.NS.6.c
4. A. Only opposite numbers can have the same absolute value but be greater than or less than each other. 6.NS.7.d
5. 0.625 Find 5 divided by 8. When you use long division, remember to place the decimal point to the right of 5 and directly above it in the quotient when dividing. 7.NS.2.d
6. B. The points in choice B lie on a straight line. 8.F.3
7. C. The point that does not follow the general pattern or trend is (87, 130). 8.SP.1
8. A. The scuba diver moves in opposite directions, down then up; $-129 + 129 = 0$. 7.NS.1.a
9. C. Walking away from home increases the distance from home and is represented by a positive number. Walking towards home decreases the distance from home and is represented by a negative number. 7.NS.1.b
10. C, F. Subtracting a number is equivalent to adding its opposite. 7.NS.1.c
11. C. Multiplying the value lost each day by the number of days results in the total value lost over the total number of days, or a \$7.50 loss over 5 days. 7.NS.2.a
12. D. One bag lasts $\frac{1}{2}$ day, $\frac{2}{3}$ bag lasts $(\frac{1}{2}) \times (\frac{2}{3})$ days, or $\frac{2}{6} = \frac{1}{3}$. 7.NS.2.b
13. D. Use the first equation to obtain $x = 10 - 2y$, and substitute for x in the second equation.
- $$\begin{aligned} 3(10 - 2y) + 5y &= 26 \\ 30 - 6y + 5y &= 26 \\ 30 - y &= 26 \\ -y &= 26 - 30 \\ -y &= -4 \\ y &= 4 \end{aligned}$$

Substitute $y = 4$ in the equation $x = 10 - 2y$.
 $x = 10 - 2(4) = 10 - 8 = 2$
The solution is (2, 4). 8.EE.8.b

14. D. The total charge for the sailboat must be no more than \$108, so $60 + 12h \leq 108$. Subtract 60 from both sides, and then divide each side by 12. 7.EE.4.b
15. A. To raise a power to a power, multiply the exponents. Rewrite the negative exponent in the denominator of the fraction as a positive exponent in the numerator of the fraction. 8.EE.1
16. B, D. A horizontal reflection flips the image across the y -axis. The same result is obtained by rotating 90° counterclockwise about the origin and sliding the triangle on a diagonal. The triangle on the right is $\frac{15}{20} = \frac{3}{4}$ as large as the one on the left. 8.G.4
17. B. The grade with no absences is 96, which is the y -intercept. The slope of the line is -3.4 , which is the decrease for each absence. 8.SP.3
18. B. The decreasing fuel level represents fuel being used as Roger drives. The flat line represents the car being stopped and using no fuel. The sharp increase represents fuel being added. The final decreasing line segment represents Roger driving again. 8.F.5
19. B. The total cost is equal to the cost per day multiplied by the number of days in the rental period. 7.RP.2.c
20. D. Find the rate of change in 12 minutes by subtracting the distance from home at 12 minutes from the distance from home at 24 minutes $11.8 - 9.4 = 2.4$. Subtract the rate of change from the distance from home at 12 minutes to find how far Jane's house is from her friend's house; $9.4 - 2.4 = 7$. 8.F.4
21. B. In Segment 2, the graph is NOT a straight line and the line slopes upward from left to right. 8.F.5
22. D. Since there are two choices, mowing the yard and not mowing the yard, the theoretical probability is represented as $\frac{1}{2}$ or 0.5. 7.SP.5
23. B. $P(3)$ is 1 out of 6 on each throw, so the probability for two throws is $\frac{1}{6} \times \frac{1}{6} = \frac{1}{36}$. 7.SP.8.a
24. D. Both probabilities are $\frac{1}{6}$. 7.SP.8.b
25. B. To find the measure of the other angle, subtract the known measure from 90° : $90^\circ - 36^\circ = 54^\circ$. 7.G.5
26. A. A horizontal reflection flips the image across the y -axis, and a translation moves it down. 8.G.2

Part 2

27. A. When there are no outliers, the mean is usually the best single number that can represent all the data. 6.SP.5.d

28. B. The length of the longer route is the sum of the legs of a right triangle: $60 + 80 = 140$ yards. The length of the shorter, direct route is the hypotenuse. Its length is $\sqrt{60^2 + 80^2} = \sqrt{3600 + 6400} = \sqrt{10,000} = 100$ yards. The difference is $140 - 100 = 40$ yards. 8.G.7
29. D. Make a right triangle using the given coordinates. The distance between the two points is the hypotenuse of the right triangle. Find the difference between the x-coordinates: $-9 - 6 = -15$.
Find the difference between the y-coordinates: $7 - (-1) = 8$.
Use the Pythagorean Theorem to find the hypotenuse:
 $-15^2 + 8^2 = c^2$
 $225 + 64 = c^2$
 $289 = c^2$
 $\sqrt{289} = \sqrt{c^2}$
 $17 = c$ 8.G.8
30. C. The least sum of any row or column is $24 + 44$, which represents movie watchers. 8.SP.4
31. D. Model the situation with an equation; multiply \$6 by x number of smoothies, add \$10, and set the sum equal to \$100: $6x + 10 = 100$. To solve, subtract 10 from both sides, and then divide each side by 6; $x = 15$. 7.EE.4.a
32. B. Rewrite and simplify. $\frac{0.000000006}{0.0000000015} = \frac{0.6}{0.015}$
 $= 40$. 8.EE.3
33. C. Find the cube root of 512. Since $8 \times 8 \times 8 = 512$, $\sqrt[3]{512} = 8$. 8.EE.2
34. C. The unit rate for the 10-pound bag is $\frac{\$13.60}{10}$ pounds = \$1.36 per pound. The unit rate for the 25-pound bag is $\frac{\$33.50}{25}$ pounds = \$1.34 per pound. The cost per pound is less for the 25-pound bag, making it the better buy. 6.RP.3.b
35. D. Divide each set of dollars earned by the corresponding number of hours; $\frac{137.40}{12} = 11.45$, $\frac{177}{15} = 11.80$, and $\frac{266.20}{22} = 12.10$. Since the ratios are not constant, the relationship is not proportional. 7.RP.2.a
36. B. Since the graph is a straight line through the origin, the relationship is proportional. Choose a point on the graph and divide the y-coordinate by the x-coordinate to find the constant of proportionality. $\frac{6}{4} = 1.5$. 7.RP.2.b
37. D. Three surveys of 100 customers each is a total of $3 \times 100 = 300$ customers. $32 + 34 + 35 = 101$ customers said their favorite sandwich is turkey, which is a rate of $101 \div 300 \approx 0.33667$. Out of 1,000, the number whose favorite is turkey is expected to be $0.33667 \times 1000 = 336.67$, which is about 337 customers. 7.SP.2
38. A. The mean height is 8 inches greater for group B. The variation is greater for group A since the MAD is 1.9 higher than the MAD of group B. 7.SP.4
39. C. Use the formula for the area of a circle; $A = \pi r^2$. Substitute 3.14 for π and 4.5 for r . 7.G.4
40. C. To find the volume of a rectangular prism, multiply the length, width, and height: $4.5 \times 2.25 \times 1.75 \approx 17.7$. 7.G.6

Level D Pretest: Analysis Chart

Instructions: This chart can help you determine your strengths and weaknesses on the math skills assessed on the TABE 11 & 12 test. Use the Answers and Explanations starting on page 180 to check your answers to the test. Then, place an X next to the item numbers you missed. Review the lessons identified for any missed items.

Pretest Item	Correct/Incorrect	For incorrect items, review the following lesson
1		Lesson 24
2		Lesson 5
3		Lesson 9
4		Lesson 16
5		Lesson 25
6		Lesson 39
7		Lesson 48
8		Lesson 1
9		Lesson 8
10		Lesson 17
11		Lesson 3
12		Lesson 23
13		Lesson 26
14		Lesson 11
15		Lesson 10
16		Lesson 51
17		Lesson 40
18		Lesson 27
19		Lesson 18
20		Lesson 2
21		Lesson 13
22		Lesson 50
23		Lesson 37
24		Lesson 22
25		Lesson 7
26		Lesson 28
27		Lesson 49

Pretest Item	Correct/Incorrect	For incorrect items, review the following lesson
28		Lesson 34
29		Lesson 14
30		Lesson 4
31		Lesson 47
32		Lesson 35
33		Lesson 21
34		Lesson 6
35		Lesson 29
36		Lesson 33
37		Lesson 45
38		Lesson 12
39		Lesson 38
40		Lesson 20
41		Lesson 31
42		Lesson 44
43		Lesson 15
44		Lesson 32
45		Lesson 43
46		Lesson 30
47		Lesson 42
48		Lesson 36
49		Lesson 41
50		Lesson 46
51		Lesson 19