#### 5

#### Short Answer

Estimate by rounding to the nearest whole number.

1. 114.3406 - 19.2647

Subtract.

2. 7.42 - 1.9

# Evaluate each expression for the given value of the variable.

- 3. 5*w* if w = 3
- 4. The number of pets owned by some students in Ms. Hamilton's science class is in the line plot below. How many students took part in the survey? How many pets are owned in all by these students?



5. Find the area of the shaded region. Express your answer as a fraction. Justify your answer.



Evaluate each expression.

6. s + f if s = 7 and f = 12

Evaluate each expression.

7.  $576 - (16 \times 9)$ 

Find the mean for each set of data.

8. 32, 46, 26, 45, 32, 43, 28

Several students went bowling after school. Their scores are shown in the frequency table.

Score	Tally	Frequency
Under 100	1111	6
100–109		7
110–119		12
120–129	<b>111</b>	5
130–139		3
Over 140		2

9. If these same students were to bowl another game, how many scores above 150 would you expect to see?

At the Woodlands Summer Camp, teams of three students compete in an obstacle course race through the woods. Along the way, the teams must use the skills they've learned to solve problems. The results of the race are shown in the bar graph.



10. How much longer did the Condors take than the Owls to complete the race?



#### Two fifth grade classrooms collected box tops for four months during the year.

11. How many more box tops did Class A collect than Class B in the month of February?

Lisa runs a small business from her home arranging and selling floral displays. She has plotted her sales figures from the first six quarters in the line graph. Use the graph to answer the following questions.



12. What were Lisa's total sales during the second quarter?

#### Select an appropriate type of graph for data gathered about each situation.

- 13. The number of people that made the two-point shot at an amusement park game.
- 14. The highest batting average over the 2006 baseball season.
- 15. The number of two-point field goals compared to the number of three-point field goals each player made.

#### Write each improper fraction as a mixed number.

16.  $\frac{22}{7}$ 

Replace each  $\bigcirc$  with <, >, or = to make a true statement.

17.  $\frac{6}{8}$   $\bigcirc$   $\frac{30}{40}$ 

#### Subtract. Write the difference in simplest form.

18.  $\frac{7}{8} - \frac{1}{8}$ 

Add. Write the sum in simplest form.

- 19.  $1\frac{3}{8} + 1\frac{1}{8}$
- 20.  $1\frac{1}{10} + 1\frac{1}{2}$

Subtract. Write the difference in simplest form.

21.  $1\frac{3}{4} - 1\frac{1}{4}$ 





10.6 cm

23.

Name:



Estimate the area of each figure. Each square represents 1 square centimeter.

Solve. Use the *make a model* strategy.

25. Nancy is filling the bottom of a box with caramel candies. The rectangular box is 8 inches by 4 inches and the candies are  $\frac{1}{2}$ -inch squares. How many candies will she need?

#### Find the surface area of each solid. Round to the nearest tenth if necessary.

26.



#### Determine whether you need to find the perimeter, area, or volume.

27. A rectangular flower garden is 6 feet long and 3 feet wide. What measurement is needed to find the amount of border that is needed to enclose the entire garden?

Multiply. Write in simplest form.

$$28. \quad \frac{8}{13} \times \frac{6}{7}$$

29.  $2\frac{2}{5} \times \frac{9}{17}$ 

Find each quotient. Write in simplest form.

30. 
$$7\frac{1}{2} \div 2$$

31.  $2\frac{1}{5} \div 2\frac{1}{4}$ 

# Solve. Use the four-step plan.

32. Emily is playing a game that uses a spinner with two equal parts. When the spinner lands on green, she advances her playing piece 4 spaces. When the spinner lands on red, she goes back 2 spaces. After 5 spins, Emily is 8 spaces ahead of where she started. How many times did she land on green and on red?

# Solve.

33. Alicia grows at an average rate of one and seventy-five hundredths of an inch each year. Write this number in standard form and in expanded form.

# Tell whether an exact number or estimate is needed. Then solve.

34. Carie and her friend Sade are planning a trip to the amusement park. They know that they will each need \$20 to get in and approximately \$15 for food and drinks. How much money will the girls need to go to the amusement park?

# Subtract to solve. Use addition or estimation to check.

35. There are 898 steps in the Washington Monument. It is a security guard's job to walk up the steps every day. If he goes up 482 steps and stops to rest, how many more steps does he have to go until he reaches the top?

# Solve. Use the act it out strategy.

36. Jenny bought a string of 30 green lights. She decided she wanted multicolor lights instead, so she exchanged the bulbs. She replaced every third green bulb with a blue one. She then replaced every fourth bulb with a red one. Finally, she replaced every fifth bulb with a yellow one. How many green bulbs were left?

37. A doctor's office gives candy to every child that comes in. They bought a bag of 200 pieces of candy at the beginning of the month. That month they had 173 children in the office. At the end of the month they bought another bag of 200 pieces. How much candy did they have after buying the second bag?

## Use any strategy shown below to solve the problem.

Problem-Solving Strategies
Guess and check.
Work backward.
Draw a picture
Act it out.
Solve a simpler problem.

38. A country club is putting up fencing around two tennis courts that are side by side. Each court is 60 feet wide by 120 feet long. How much fencing is needed?

## Solve. Use the *make a table* strategy.

39. Billy's football team scored a touchdown for every 10 plays it made. Each touchdown is worth 7 points. How many touchdowns did the team score if it made 50 plays? How many points did the team score? Complete the table to help you find the answers.

plays	10	20	30	40	50
touchdowns	1	2			

Make a line plot for each set of data.

<sup>40.</sup> 

Average Grades in						
Science Class						
62	73	76	77	52		
73	66	45	91	77		
81	90	96	68	89		
61	82	82	86	70		

Make a frequency table for each set of data.

4	1	_

How Students Get to						
	Scho	ol Each	n Day			
В	Р	В	Р	Р		
Р	В	Р	Р	В		
Р	W	В	Р	В		
W	Р	В	В	Р		
P B P W B						
P = Pa	rents, W	V = Wa	lk, B = 1	Bus		

# Make a bar graph or double bar graph for each set of data.

42. The table shows how many camps each student plans to attend this summer.

Student	Number of Camps
Kris	2
Tammy	4
Molly	1
Darryl	4

Make a line graph or double line graph for each set of data.

43.

Goals Allowed						
Game	Sixth					
		Grade				
1	12	6				
2	11	5				
3	10	4				
4	9	1				
5	8	2				

#### Solve.

44. Find the mean, median and mode of the data represented.



#### Jeremy's Running Schedule

45. Find the perimeter of the larger rectangle in inches.



46. The Lincoln Middle School athletic department added more seating in the bleacher section of their track field. The original seating area measured 80 meters by 60 meters. The additional seating added 15 meters to each side of the length and 20 meters to the top of the bleacher section. Find the perimeter of the bleacher section after the addition. What is the difference between the perimeter of the old bleacher section and the new bleacher seating?

#### Find the fraction. Then give an equivalent fraction.

47. Sandra spends 8 hours a day at school. What fraction of the day does she spend at school?

## Find the fraction. Then change it into its simplest form.

- 48. Barry eats 3 meals a day. It takes him 1 hour to eat each meal. What fraction of the day does Barry spend eating?
- 49. The table shows what part of the total dollar amount each student raised during the last fund-raising drive. Find what part of the total fund-raising amount Audrey raised. Justify your answer.

<b>Contribution Amounts</b>				
Jenna	$\frac{1}{10}$			
Sabrina	$\frac{2}{5}$			
Cheyenne	$\frac{1}{3}$			
Maya	$\frac{1}{8}$			
Audrey	?			

#### Solve each problem.

50. Rachel and Helen are leaving for vacation on the same day. Rachel will be gone for 14 days and Helen will be gone for 1 week and 3 days. Who will return from vacation sooner? What is the difference between Rachel and Helen's vacation duration?

#### Solve using any of the following strategies.

<b>Problem-Solving Strategies</b>
Draw a diagram.
Look for a pattern.
Use logical reasoning.

51. Sandra and Nancy are playing a game at recess. They are facing each other and are 20 feet apart. They take turns taking a step toward one another. Nancy goes first and steps 2 feet each time. Sandra goes second and steps 3 feet each time. How far will each girl have gone when they meet?

# Graph each figure and the translation image described. Write the ordered pairs for the vertices of the image.

52. A square has vertices R(3, 1), S(6, 1), T(6, 4), and U(3, 4). Translate the square two units right and four units up.

53. Find the surface area of this rectangular prism.



54. Caleb estimates that the surface area of a rectangular prism with a length of 15.7 centimeters, a width of 8.9 centimeters, and a height of 3.1 centimeters is about 600 cubic centimeters. Is his estimate reasonable? Explain your reasoning.

# 5 Answer Section

#### SHORT ANSWER

1. ANS: 95

PTS:1DIF:AverageREF:Lesson 2-2OBJ:2-2.2Estimate differencesNAT:G5-FP2STA:6.C.2bTOP:Estimate Sums and DifferencesKEY:Estimate, Differences

- 2. ANS:
  - 5.52

Align the decimal point for both numbers. Place the decimal point for the answer under the decimal point for the numbers to be subtracted. Subtract the second number from the first number.

15

You can evaluate an algebraic expression by replacing the variables with numbers and then finding the value of the numerical expression.

PTS:	1	DIF:	Average	REF:	Lesson 5-3			
OBJ:	5-3.2 Evaluat	e mult	iplication exp	ressions		NAT:	G5-FP4C	
STA:	8.B.2	TOP:	Multiplicatio	n Expre	essions	KEY:	Expressions,	Multiplication
ANS								

4. ANS:

10 students took part in the survey, and these students own a total of 53 pets. Add the number of Xs for the number of students that took part in the survey. Add the data that each X represents to find the total number of pets.

PTS:1DIF:AverageREF:Lesson 7-3OBJ:7-3.3 Make and interpret line plots- Solve multi-step problemsNAT:G5-FP6C | G5-FP4CSTA:10.B.2b | 10.B.2cTOP:Line PlotsKEY:Line plots

 $309\frac{4}{5}$  m<sup>2</sup>; the area of the larger rectangle is  $32\frac{1}{5} \times 22\frac{1}{5}$  or  $714\frac{21}{25}$  m<sup>2</sup>. The area of the smaller rectangle is  $24\frac{2}{5} \times 16\frac{3}{5}$  or  $405\frac{1}{25}$  m<sup>2</sup>. The area of the shaded region is the difference in the two rectangle areas,  $714\frac{21}{25} - 405\frac{1}{25}$  or  $309\frac{4}{5}$  m<sup>2</sup>. PTS: 1 DIF: Average REF: Lesson 14-3 OBJ: 14-3.2 Find the areas of rectangles - Solve multi-step problems NAT: G5-FP3 | G5-FP5C STA: 7.A.2a TOP: Areas of Rectangles and Squares KEY: Area, Rectangles 6. ANS: 19 You can evaluate an algebraic expression by replacing the variables with numbers and then finding the value of the numerical expression. PTS: 1 DIF: Average REF: Lesson 5-4 OBJ: 5-4.2 Evaluate algebraic expressions NAT: G5-FP4C TOP: More Algebraic Expressions STA: 8.B.2 **KEY:** Expressions 7. ANS: 432 Simplify all operations within grouping symbols. Multiply and divide in order from left to right. Add and subtract in order from left to right. PTS: 1 DIF: Average REF: Lesson 5-7 OBJ: 5-7.1 Use order of operations to evaluate expressions NAT: G5-FP4C STA: 8.C.2 **TOP:** Order of Operations KEY: Order of operations 8. ANS: 36 Sample: 24, 24, 8, 11, 10, 17, 25 Add the numbers and divide by 7.  $\frac{24 + 24 + 8 + 11 + 10 + 17 + 25}{7} = \frac{119}{7} = 17$ PTS: 1 REF: Lesson 7-1 DIF: Average NAT: G5-FP6C | G5-FP4C OBJ: 7-1.1 Find the mean of a set of data TOP: Mean, Median, and Mode KEY: Mean, Analyzing data STA: 10.A.2b

1

Since there were only 2 scores above 140 last time, there would probably be no more than 1 score above 150 this time. Option c is the most reasonable answer.

REF: Lesson 7-4 PTS: 1 DIF: Average OBJ: 7-4.1 Interpret frequency tables NAT: G5-FP6C | G5-FP4C STA: 10.B.2c **TOP:** Frequency Tables **KEY:** Frequency tables 10. ANS: 6 minutes Subtract the time for the Owls from the time for the Condors. 28 - 22 = 6 minutes REF: Lesson 7-6 PTS: 1 DIF: Average OBJ: 7-6.1 Interpret bar graphs and double bar graphs NAT: G5-FP6C | G5-FP4C STA: 10.B.2c **TOP:** Bar Graphs KEY: Bar graphs 11. ANS: 100 Look at the bars for the month of February. Class A collected 225 box tops and Class B collected 125 box tops. The difference is 100. PTS: 1 DIF: Average REF: Lesson 7-6 OBJ: 7-6.1 Interpret bar graphs and double bar graphs NAT: G5-FP6C | G5-FP4C TOP: Bar Graphs STA: 10.B.2c KEY: Bar graphs 12. ANS: \$12,000 The sales in the second quarter were \$12,000. PTS: 1 DIF: Average REF: Lesson 7-7 OBJ: 7-7.1 Interpret line graphs and double line graphs NAT: G5-FP6C | G5-FP4C STA: 10.B.2c TOP: Line Graphs KEY: Line graphs 13. ANS: line plot A line plot shows how often each number occurs. PTS: 1 DIF: Average REF: Lesson 7-8 OBJ: 7-8.1 Select and make an appropriate graph for presenting data NAT: G5-FP6C | G5-FP4C STA: 10.B.2b TOP: Use an Appropriate Graph

KEY: Graphs, Data

line graph

A line graph represents data that changes over time.

- PTS: 1 REF: Lesson 7-8 DIF: Average OBJ: 7-8.1 Select and make an appropriate graph for presenting data NAT: G5-FP6C | G5-FP4C STA: 10.B.2b TOP: Use an Appropriate Graph KEY: Graphs, Data 15. ANS: double bar graph A double bar graph shows the comparison of two different categories. PTS: 1 DIF: Average REF: Lesson 7-8 OBJ: 7-8.1 Select and make an appropriate graph for presenting data NAT: G5-FP6C | G5-FP4C STA: 10.B.2b TOP: Use an Appropriate Graph
  - KEY: Graphs, Data
- 16. ANS:

 $3\frac{1}{7}$ 

- PTS: 1 REF: Lesson 8-2 DIF: Average OBJ: 8-2.1 Write improper fractions as mixed numbers NAT: G5-FP2 | G5-FP4C STA: 6.A.2 **TOP:** Improper Fractions KEY: Improper fractions, Mixed numbers
- 17. ANS: =

Sample:

 $\frac{6}{11}$   $\bigcirc$   $\frac{1}{4}$ 

Find the LCM for both denominators. Rewrite each fraction using the LCM. Then compare the fractions.

$\frac{6 \times 4}{11 \times 4}$ $\frac{24}{44} > $	$\frac{\frac{1}{4}}{\frac{11}{44}} \bigcirc \frac{1 \times 11}{4 \times 11}$				
PTS:	1 DI	F: Average	REF: Lesson 9-9		
OBJ:	9-9.1 Compare fr	actions using c	common denominators	NAT: G5-FP4C   G5	-FP2
STA:	6.A.2 TO	P: Compare F	Tractions	KEY: Compare, Cor	nmon denominators

 $\frac{3}{4}$ 

To subtract fractions with like denominators, subtract the numerators. Use the same denominator in the difference.

PTS: 1 DIF: Average REF: Lesson 10-2 OBJ: 10-2.1 Subtract fractions with like denominators STA: 6.B.2 TOP: Subtract Like Fractions KEY: Fractions, Subtraction 19. ANS:  $2\frac{1}{2}$ 

To add mixed numbers, add the fractions. Then add the whole numbers. Rename and simplify if necessary.

PTS:1DIF:AverageREF:Lesson 10-7OBJ:10-7.1Add mixed numbersNAT:G5-FP4C | G5-FP2STA:6.B.2TOP:Add Mixed NumbersKEY:Mixed numbers,AdditionAdd Mixed Numbers

20. ANS:

 $2\frac{3}{5}$ 

To add mixed numbers, add the fractions. Then add the whole numbers. Rename and simplify if necessary.

PTS:1DIF:AverageREF:Lesson 10-7OBJ:10-7.1Add mixed numbersNAT:G5-FP4C | G5-FP2STA:6.B.2TOP:Add Mixed NumbersKEY:Mixed numbers,Addition

21. ANS:

 $\frac{1}{2}$ 

To subtract mixed numbers, subtract the fractions. Then subtract the whole numbers. Rename and simplify if necessary.

PTS:DIF:AverageREF:Lesson 10-8OBJ:10-8.1Subtract mixed numbersNAT:G5-FP4C | G5-FP2STA:6.B.2TOP:Subtract Mixed NumbersKEY:Mixed numbers, SubtractionSubtractSubtract Mixed Numbers

22. ANS:

12.6 in.

The perimeter of a rectangle is the sum of the measures of the sides. It can also be expressed as two times the length (*l*) plus two times the width (*w*).

2.1 + 2.1 + 4.2 + 4.2 = 12.6

PTS:	1	DIF:	Average	REF:	Lesson 14-1		
OBJ:	14-1.1 Find the perimeters of polygons					NAT: G5-FP3	G5-FP5C
STA:	7.A.2a	7.A.2a TOP: Perimeters of Polygons					er

- 23. ANS:
  - 31.8 cm

The perimeter of a rectangle is the sum of the measures of the sides. It can also be expressed as two times the length (l) plus two times the width (w).

5.3 + 5.3 + 10.6 + 10.6 = 31.8

REF: Lesson 14-1 PTS: 1 DIF: Average OBJ: 14-1.1 Find the perimeters of polygons NAT: G5-FP3 | G5-FP5C TOP: Perimeters of Polygons **KEY:** Perimeter STA: 7.A.2a 24. ANS:  $50 \text{ cm}^2$ There are 42 whole squares and 16 partial squares. PTS: 1 DIF: Average REF: Lesson 14-2 OBJ: 14-2.1 Find and estimate the area of figures by counting squares NAT: G5-FP3 | G5-FP5C TOP: Area KEY: Area, Estimate 25. ANS: 128 The length of the box will hold 16 carmel candies and the width will hold 8 carmel candies. Eight times 16 is 128 carmel candies.

PTS:1DIF:AverageREF:Lesson 14-5OBJ:14-5.1 Solve problems by making a modelNAT:G5-FP3 | G5-FP5CSTA:9.A.2aTOP:Problem-Solving Strategy:Make a ModelKEY:Make model

26. ANS: 430 mm<sup>2</sup> Sample:

simplest form.



Find the area of each of the six faces. Add these together to find the total surface area. SA = 2(9)(5) + 2(5)(13) + 2(9)(13) SA = 90 + 130 + 234SA = 454 ft<sup>2</sup>

PTS: 1 DIF: Average REF: Lesson 14-7 OBJ: 14-7.1 Find the surface area of rectangular prisms NAT: G5-FP3 | G5-FP5C TOP: Surface Area of Prisms STA: 7.A.2a KEY: Surface area, Prisms 27. ANS: perimeter The perimeter is the length around a figure. REF: Lesson 14-8 PTS: 1 DIF: Average OBJ: 14-8.1 Select and use appropriate units and formulas to measure length, perimeter, area, and NAT: G5-FP3 | G5-FP5C STA: 7.A.2a volume KEY: Units, Formulas **TOP:** Select Appropriate Measurement Formulas 28. ANS: 48 91 To multiply fractions, multiply the numerators and multiply the denominators. Write your answer in

PTS:1DIF:BasicREF:Lesson 5-7OBJ:5-7.1 Multiply fractions.NAT:FP1STA:6.B.3a | 6.C.3aTOP:Multiply fractions.KEY:Multiplication | Fractions

 $1\frac{23}{85}$ 

To multiply mixed numbers, convert both factors to improper fractions. Then multiply the numerators and denominators. Simplify.

PTS:1DIF:AverageREF:Lesson 5-8OBJ:5-8.1 Multiply mixed numbers.NAT:FP1STA:6.B.3a | 6.C.3aTOP:Multiply mixed numbers.KEY:Multiplication | Mixed numbers

30. ANS:

 $3\frac{3}{4}$ 

To divide mixed numbers, change both of them to fractions. Then multiply the first by the reciprocal of the second.

PTS:1DIF:AverageREF:Lesson 5-10OBJ:5-10.1 Divide mixed numbers.NAT:FP1 | FP4CSTA:6.B.3a | 6.C.3aTOP:Divide mixed numbers.KEY:Division | Mixed numbersKEY:Division | Mixed numbers

#### 31. ANS:

 $\frac{44}{45}$ 

To divide mixed numbers, change both of them to fractions. Then multiply the first by the reciprocal of the second.

PTS:1DIF:AverageREF:Lesson 5-10OBJ:5-10.1Divide mixed numbers.NAT:FP1 | FP4CSTA:6.B.3a | 6.C.3aTOP:Divide mixed numbers.KEY:Division | Mixed numbers

32. ANS:

 $4 \times 3$  green = 12 ahead

 $2 \times 2$  red = 4 backwards

12 - 4 = 8 spaces ahead. Therefore, Emily landed on green 3 times and red 2 times.

PTS: 1 DIF: Average REF: Lesson 1-3

OBJ: 1-3.2 Use the four-step plan to solve a problem - Solve multi-step problems

NAT: G5-FP7C STA: 6.C.2a TOP: Problem-Solving Investigation: Use the Four-Step Plan KEY: Four-step plan

#### 33. ANS:

1.075

1 + 0.07 + 0.005

PTS:1DIF:AverageREF:Lesson 1-5OBJ:1-5.5 Read and write decimals in standard form, expanded form, and word form - Solve multi-stepproblemsNAT:G5-FP7CSTA:6.A.2TOP:Place Value Through ThousandthsKEY:Place value, Decimals

34. ANS: estimate 20 + 15 + 20 + 15 = 70REF: Lesson 2-5 PTS: 1 DIF: Average OBJ: 2-5.2 Determine if a problem needs an estimate or an exact answer - Solve multi-step problems NAT: G5-FP2 STA: 6.C.2b TOP: Problem-Solving Investigation: Estimate or Exact Answer KEY: Estimate or exact 35. ANS: Solve: 898 - 482 = 416 steps Check with addition: 482 + 416 = 898or Estimate: 900 - 480 = 420 years Check: 420 is close to 416. Therefore, it is reasonable. PTS: 1 DIF: Average REF: Lesson 2-8 OBJ: 2-8.3 Use the compensation strategy to add and subtract whole numbers and decimals mentally -Solve multi-step problems NAT: G5-FP2 STA: 6.C.2a KEY: Addition, Subtraction TOP: Add and Subtract Mentally 36. ANS: 12 green bulbs are left. Act it out with colored cubes. PTS: 1 DIF: Average REF: Lesson 4-5 OBJ: 4-5.2 Solve problems using the act it out strategy - Solve multi-step problems NAT: G5-FP1 | G5-FP7C STA: 6.C.2a TOP: Problem-Solving Strategy: Act It Out KEY: Act it out 37. ANS: They had 227 pieces of candy. 200 - 173 + 200 = 227REF: Lesson 4-5 PTS: 1 DIF: Average OBJ: 4-5.2 Solve problems using the act it out strategy - Solve multi-step problems NAT: G5-FP1 | G5-FP7C STA: 6.C.2a TOP: Problem-Solving Strategy: Act It Out KEY: Act it out

- 38. ANS:
  - 480 feet



 $120 \times 2 + 60 \times 4 = 480$ 

PTS: 1 DIF: Average REF: Lesson 5-5 OBJ: 5-5.2 Choose the best strategy to solve a problem - Solve multi-step problems NAT: G5-FP4C STA: 6.C.2a TOP: Problem-Solving Investigation: Choose the Best Strategy KEY: Choose strategy 39. ANS: 5 touchdowns; 35 points  $5 \times 7 = 35$ REF: Lesson 6-3 PTS: 1 DIF: Average OBJ: 6-3.2 Solve problems by making a table - Solve multi-step problems NAT: G5-FP4C STA: 10.B.2b TOP: Problem-Solving Strategy: Make a Table KEY: Make table

40. ANS:

х х х x x x x x xx хх х ХХ X XXX х х 50 55 60 65 70 75 80 85 90 95 100 PTS: 1 DIF: Average REF: Lesson 7-3 OBJ: 7-3.2 Make line plots **TOP:** Line Plots NAT: G5-FP6C | G5-FP4C STA: 10.B.2b

KEY: Line plots

Method of Transportation	Tally	Frequency
Р		12
W		3
В	HH HH	10

Mark each entry with a tally mark and then add them to find the frequency of each category.

PTS:1DIF:AverageREF:Lesson 7-4OBJ:7-4.2 Make frequency tablesNAT:G5-FP6C | G5-FP4CSTA:10.B.2bTOP:Frequency TablesKEY:Frequency tables



Draw and label appropriate vertical and horizontal axes. Then draw a bar to represent each data point. All reasonably drawn graphs should be accepted.

PTS:	1	DIF:	Average	REF:	Lesson 7-6	
OBJ:	7-6.2 Make b	oar grapł	NAT: G5-FP6C   G5-FP4C			
STA:	10.B.2b	TOP:	Bar Graphs	KEY:	Bar graphs	



Plot each data point on a coordinate grid. Connect sequential points with line segments. Use different colors or points for each line. Make a key. All reasonably drawn graphs should be accepted.

PTS: 1 DIF: Average REF: Lesson 7-7
OBJ: 7-7.2 Make line graphs and double line graphs
STA: 10.B.2b TOP: Line Graphs KEY: Line graphs
44. ANS: mean: 8, median: 7, mode: 4

Order the data from least to greatest to find the median. Find the sum of all the miles run during the week and divide by 7 to find the mean.

PTS: 1 DIF: Average REF: Lesson 7-1
OBJ: 7-1.4 Find the mean, median, and mode of a set of data - Solve multi-step problems
NAT: G5-FP6C | G5-FP4C STA: 10.A.2b TOP: Mean, Median, and Mode
KEY: Mean, Median, Mode

45. ANS:

493.2 in.

Convert the measurements to inches.  $9.45 \times 12 = 113.4$   $11.1 \times 12 = 133.2$ Use the formula P = 2l + 2w to find the perimeter. P = 2(113.4) + 2(133.2) = 493.2

PTS:1DIF: AverageREF: Lesson 14-1OBJ:14-1.2 Find the perimeters of polygons - Solve multi-step problemsNAT:G5-FP3 | G5-FP5CSTA:7.A.2aKEY:Perimeter

380 meters; 100 meters

The original dimensions were 80 meters by 60 meters. The perimeter for the old bleacher section was 2(80) + 2(60) or 280 meters. The length increased by 15 meters on each side, so the length is now 15 + 80 + 15 or 110 meters. The height increased by 20 meters, but only to one side, so the height is now 60 + 20 or 80 meters. Use the formula P = 2l + 2w to find the perimeter. P = 2(110) + 2(80) = 380 meters

The difference between the perimeters is 380 – 280 or 100 meters.

PTS: 1 DIF: Average REF: Lesson 14-1 OBJ: 14-1.2 Find the perimeters of polygons - Solve multi-step problems NAT: G5-FP3 | G5-FP5C STA: 7.A.2a **TOP:** Perimeters of Polygons **KEY:** Perimeter 47. ANS:  $\frac{8}{24}$ ; possible equivalent fractions:  $\frac{1}{3}$ ,  $\frac{2}{6}$ ,  $\frac{4}{12}$ PTS: 1 DIF: Average REF: Lesson 9-3 OBJ: 9-3.2 Write a fraction that is equivalent to a given fraction - Solve multi-step problems NAT: G5-FP4C | G5-FP2 STA: 6.A.2 **TOP:** Equivalent Fractions KEY: Fractions, Equivalent 48. ANS:  $\frac{3}{24}$ ; simplest form:  $\frac{1}{8}$ REF: Lesson 9-4 PTS: 1 DIF: Average OBJ: 9-4.2 Write a fraction in simplest form - Solve multi-step problems NAT: G5-FP4C | G5-FP2 STA: 6.A.2 **TOP:** Simplest Form **KEY:** Simplest form 49. ANS:  $\frac{1}{24}$ ; sample answer: The LCD of  $\frac{1}{10}$ ,  $\frac{2}{5}$ ,  $\frac{1}{3}$ , and  $\frac{1}{8}$  is 240. I made equivalent fractions and found the sum of the given amounts. Then I subtracted this sum from 1 and simplified it. The equivalent fractions are  $\frac{24}{240}$ ,  $\frac{96}{240}$ ,  $\frac{80}{240}$ , and  $\frac{30}{240}$ . The sum of these fractions is  $\frac{230}{240}$ , so the remaining fraction must be  $\frac{10}{240}$ , or  $\frac{1}{24}$ . PTS: 1 DIF: Average REF: Lesson 10-4 OBJ: 10-4.2 Subtract unlike fractions - Solve multi-step problems NAT: G5-FP4C | G5-FP2 **TOP:** Subtract Unlike Fractions STA: 6.B.2 KEY: Fractions, Unlike denominators

Helen will return from vacation sooner. Rachel's vacation is 4 days longer.

1 wk = 7 days7 days + 3 days = 10 days

14 days > 10 days

PTS:1DIF:AverageREF:Lesson 11-5OBJ:11-5.2 Convert units of time - Solve multi-step problemsNAT:G5-FP5CSTA:7.A.2aTOP:Units of TimeKEY:Time,Convert

51. ANS:

Sandra: 12 feet, Nancy: 8 feet

PTS: 1 DIF: Average REF: Lesson 13-5

- OBJ: 13-5.2 Choose the best strategy to solve a problem Solve multi-step problems
- NAT: G5-FP3 STA: 6.C.2a
- TOP: Problem-Solving Investigation: Choose the Best Strategy
- KEY: Choose strategy

52. ANS:



*R*(5, 5), *S*(8, 5), *T*(8, 8), *U*(5, 8)

PTS:1DIF:AverageREF:Lesson 13-6OBJ:13-6.2 Sketch translations on a coordinate grid - Solve multi-step problemsNAT:G5-FP3STA:9.A.2cTOP:Translations and GraphsKEY:Translations

444 m<sup>2</sup>

Find the area of each face. The area of the top and bottom are  $2(lw) = 2(10 \times 13)$  or 260 m<sup>2</sup>. The area of the front and back faces are  $2(lw) = 2(10 \times 4)$  or 80 m<sup>2</sup>. The areas of the two sides are  $2(lw) = 2(13 \times 4)$  or 104 m<sup>2</sup>. Add together all the areas of the faces. The total surface area is 260 + 80 + 104 or  $444 \text{ m}^2$ .

PTS:1DIF:AverageREF:Lesson 14-7OBJ:14-7.2 Find the surface area of rectangular prisms - Solve multi-step problemsNAT:G5-FP3 | G5-FP5CSTA:7.A.2aTOP:Surface Area of PrismsKEY:Surface area, Prisms

54. ANS:

no; round each measurement to the nearest whole number, and find the area of each face. The areas of the top and bottom faces are  $2(lw) = 2(16 \times 9)$  or 288 cm<sup>2</sup>. The areas of the front and back faces are  $2(lw) = 2(16 \times 3)$  or 96 cm<sup>2</sup>. The areas of the two sides are  $2(lw) = 2(9 \times 3)$  or 54 cm<sup>2</sup>. The surface area is 288 + 96 + 54 or about 438 cm<sup>2</sup>. Caleb's estimate is too high.

PTS:1DIF:AverageREF:Lesson 14-7OBJ:14-7.2 Find the surface area of rectangular prisms - Solve multi-step problemsNAT:G5-FP3 | G5-FP5CSTA:7.A.2aTOP:Surface Area of PrismsKEY:Surface area, Prisms