

21 Weeks to the Test

Monday

1. **Extended Response** Jeremy is saving \$185 for a new bicycle. Jeremy has \$95 now and can save \$6 per week. (Lessons 1-7 and 1-8)

Part A Write an equation for the amount of money m Jeremy will have after w weeks.

Part B How much money will Jeremy have after 8 weeks? Show your work.

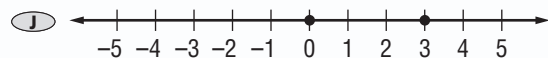
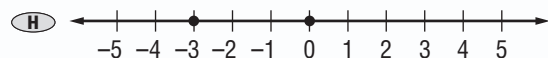
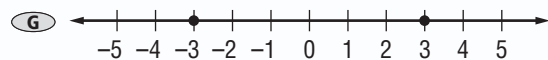
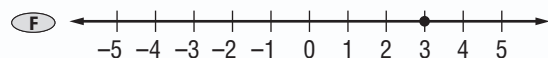
Part C After how many weeks will Jeremy have enough money for the bicycle? Show your work.

Tuesday

2. **Multiple Choice** What is the value of the expression $18 \div 3 + 3$? (Lesson 1-2)

(A) 12 (B) 9
(C) 6 (D) 3

3. **Multiple Choice** Which graph shows the value(s) for $|4 - 7|$? (Lesson 1-3)



Wednesday

4. **Multiple Choice** What is the sum of the integers -15 and 12 ? (Lesson 1-4)

(A) -27
(B) -3
(C) -1
(D) 27

5. **Multiple Choice** Valerie is 3 years younger than twice Timmy's age. If t represents Timmy's age, which expression can be used to show Valerie's age? (Lesson 1-7)

(F) $3t + 2$
(G) $2t + 3$
(H) $3t - 2$
(J) $2t - 3$

Thursday

6. **Short Response** New York City covers an area of 309 square miles. One square mile is equal to 640 acres. How many acres does the city cover? (Lesson 1-6)

Friday

7. **Short Response** The table shows the amount of time it takes Roberto to assemble computer desks. Write an equation that represents this situation. Use t for time and d for the number of desks. (Lesson 1-7)

Number of Desks	Number of Hours
1	2
3	6
5	10

20 Weeks to the Test

Monday

1. **Extended Response** Molly and Tien compared their basketball statistics. The table below shows how many points each player scored in the first 3 games of the season. (*Prerequisite Skill 2, page 602*)

	Game 1	Game 2	Game 3
Molly	11	6	12
Tien	8	10	9

Part A Sketch a double bar graph of the data.

Part B Which player scored more points in a game more often? Explain how the double bar graph helps you make a comparison of the data.

Tuesday

2. **Multiple Choice** To which number set does the number $-\frac{2}{3}$ belong? (*Lesson 2-1*)
- Ⓐ integers
 Ⓑ irrational numbers
 Ⓒ natural numbers
 Ⓓ rational numbers
3. **Multiple Choice** According to the 2000 U.S. Census, the total population of New York was approximately 18,980,000. What is this population written in scientific notation? (*Lesson 2-9*)
- Ⓕ $1,898 \times 10^4$
 Ⓖ 18.98×10^6
 Ⓗ 1.898×10^7
 Ⓙ 1.898×10^8

Wednesday

4. **Multiple Choice** What is the greatest common factor of 32 and 80? (*Prerequisite Skill 7, page 610*)
- Ⓐ 8
 Ⓑ 12
 Ⓒ 16
 Ⓓ 24
5. **Multiple Choice** Which of the following numbers represents the greatest length? (*Lesson 2-9*)
- Ⓕ 1.25×10^{-10} meters
 Ⓖ 8.433×10^{-7} meters
 Ⓗ 7.892×10^{-6} meters
 Ⓙ 3.461×10^{-5} meters

Thursday

6. **Short Response** The distance from the Earth to the moon written in scientific notation is about 3.84×10^5 kilometers. What is this distance in standard form? (*Lesson 2-9*)

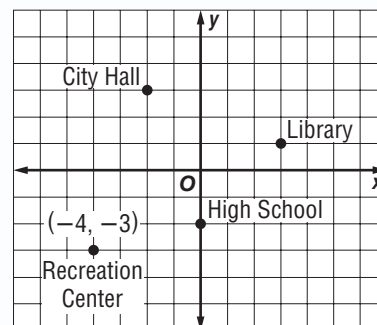
Friday

7. **Short Response** Carlos walked his dog 3 days last week. The lengths of his walks were $\frac{3}{4}$ mile, $\frac{1}{2}$ mile, and $\frac{2}{3}$ mile. What is a reasonable estimate for the total distance Carlos walked his dog last week? Show your work. (*Lesson 2-6*)

19 Weeks to the Test

Monday

1. **Extended Response** The graph at the right shows the location of several points of interest in the town of Lincoln Falls. (Lesson 3-6)
- Part A** What are the coordinates of the library?
- Part B** What building is located at $(0, -2)$?
- Part C** Describe one route from the center of town $(0, 0)$ to City Hall.



Tuesday

2. **Multiple Choice** What is the value of the expression $8g + 9h$ if $g = 2$ and $h = 4$? (Lesson 1-2)
- A 17
- B 58
- C 61
- D 119
3. **Multiple Choice** Which of the following is an irrational number? (Lesson 3-3)
- F 2.122333444455555...
- G $5.\bar{3}$
- H $6\frac{11}{144}$
- J 12.5932019573865

Wednesday

4. **Multiple Choice** Theodore Roosevelt was born in New York City in 1858. Franklin Delano Roosevelt was born in Hyde Park in 1882. How many years older was Theodore than Franklin? (Lesson 1-5)
- A 3,740 years
- B 2,190 years
- C 34 years
- D 24 years
5. **Multiple Choice** What is the value of 10^{-3} ? (Lesson 2-8)
- F $-1,000$
- G -30
- H 0.1
- J 0.001

Thursday

6. **Short Response** Between which two positive consecutive integers does $\sqrt{40}$ lie? Explain how you found your answer. (Lesson 3-2)

Friday

7. **Short Response** Is the number 0.1234567 rational or irrational? How are decimals that are rational numbers described? How are decimals that are irrational numbers described? (Lesson 3-3)

18 Weeks to the Test

Monday

1. **Extended Response** Daylan bought sets of tables and chairs for his office. Each set cost \$1,100. The delivery charge on Daylan's order was \$300. Daylan spent \$8,000. (Lesson 1-7)
- Part A** Write an equation that expresses the total cost in terms of the number of sets of tables and chairs purchased.
- Part B** Use the equation in Part A to find the number of table and chair sets that Daylan bought. Show your work.

Tuesday

2. **Multiple Choice** In 2001, about 19.2 million people lived in the state of New York. That was 15.5 million more than the population of the city of Los Angeles. Which equation can be used to find p , the population of Los Angeles? (Lesson 1-7)
- A $p + 15.5 = 19.2$
- B $p - 15.5 = 19.2$
- C $15.5p = 19.2$
- D $p + 19.2 = 15.5$
3. **Multiple Choice** What type of real number is $\sqrt{3}$? (Lesson 3-3)
- F an integer
- G an irrational number
- H a natural number
- J a rational number

Wednesday

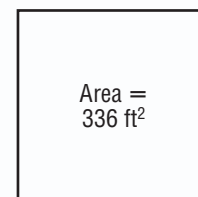
4. **Multiple Choice** Which expression shows $c \cdot d \cdot d \cdot d \cdot c$ using exponents? (Lesson 2-8)
- A c^3d^2
- B c^2d^3
- C $(cd)^5$
- D $c^2 + d^3$
5. **Multiple Choice** Between which two integers is the number $-\pi$ located on a number line? (Lesson 3-3)
- F 3 and 4
- G 2 and 3
- H -2 and -3
- J -3 and -4

Thursday

6. **Short Response** Orlando is cutting a 72-inch board and a 90-inch board to make shelves. He wants to make the shelves all the same length and wants no wood left over. What is the longest possible length that he can make the shelves? Explain how you found your answer. (Prerequisite Skill 7, page 610)

Friday

7. **Short Response** What is the approximate perimeter of Sandy's square shaped family room to the nearest tenth? Show your work. (Lesson 3-2)



17 Weeks to the Test

Monday

1. **Extended Response** Shauna traveled from Buffalo to Syracuse at an average rate of 56 miles per hour. The trip took her 2 hours and 45 minutes. Use the distance formula $d = rt$, where d is distance, r is rate of speed, and t is time, to answer each question. (Lesson 4-1)

Part A How far is it from Buffalo to Syracuse along I-90?

Part B Shauna made the return trip in two and a half hours. What was her average speed on the return trip? Explain how you determined your answer.



Tuesday

2. **Multiple Choice** What is the least common multiple of 15 and 18? (Prerequisite Skill 9, page 612)
- (A) 3
 - (B) 15
 - (C) 90
 - (D) 120
3. **Multiple Choice** What is the value of $3x^2 - y$ if $x = 2$ and $y = 5$? (Lesson 1-2)
- (F) 1
 - (G) 7
 - (H) 13
 - (J) 31

Wednesday

4. **Multiple Choice** Which shows the prime factorization of 60? (Prerequisite Skill 6, page 609)
- (A) $2 \cdot 3 \cdot 5$
 - (B) $2^2 \cdot 3 \cdot 5$
 - (C) $3 \cdot 4 \cdot 5$
 - (D) $2^2 \cdot 3^2 \cdot 7$
5. **Multiple Choice** What is the value of x in the proportion $\frac{5}{12} = \frac{x}{36}$? (Lesson 4-4)
- (F) 8
 - (G) 11
 - (H) 15
 - (J) 20

Thursday

6. **Short Response** The smaller gear on a bicycle has 18 teeth, and the larger gear has 24 teeth. How many complete rotations must the smaller gear make before both gears return to their original starting position? Explain how you found your answer. (Prerequisite Skill 7, page 610)

Friday

7. **Short Response** The distance a car travels at a rate of 70 miles per hour for t hours is represented by the expression $70t$. How far does a car travel at this rate in 5.5 hours? Show your work. (Lesson 1-2)

16 Weeks to the Test

Monday

- Extended Response** Rosita works at a furniture store where she earns a base salary of \$500 per week and a commission of 6% of her total sales. (Lesson 1-7)

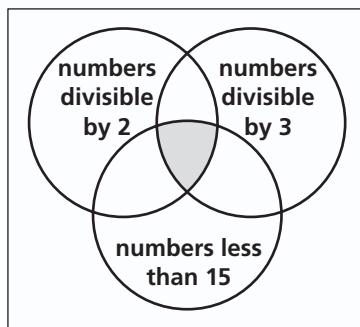
Part A Write an equation that shows Rosita's pay p per week in terms of her sales s .

Part B How much does Rosita make in a week that she sells \$2,500 in furniture?

Part C How much furniture does Rosita have to sell in a week to earn \$740?

Tuesday

- Multiple Choice** When the numbers 1 to 20 are placed in the appropriate areas of the diagram below, which numbers are in the shaded area? (Lesson 3-3a)



- A 6, 12
 B 6, 12, 18
 C 2, 3, 4, 6, 8, 9, 10, 12, 14, 15, 16
 D 2, 3, 4, 6, 8, 9, 10, 12, 14, 15, 16, 18, 20
- Multiple Choice** What is the value of 10^0 ? (Lesson 2-8)

F -10 G -1
 H 0 J 1

Wednesday

- Multiple Choice** Lewis County, New York, has about 600,000 acres of forest used for recreation, timber, and producing maple syrup. Which of the following is equivalent to 600,000? (Lesson 2-9)

A 6×10^4
 B 6×10^5
 C 6×10^6
 D 6×10^7
- Multiple Choice** What number has a prime factorization of $3^2 \cdot 5 \cdot 11$? (Prerequisite Skill 6, page 609)

F 165
 G 330
 H 495
 J 525

Thursday

- Short Response** About how many times larger is 4.95×10^6 than 5.02×10^4 ? Explain how you found your answer. (Lesson 2-9)

Friday

- Short Response** Christy had \$260 in her savings account at the beginning of the week. During the week she made deposits of \$20, \$45, and \$15, and made a withdrawal of \$50. How much did she have in her account at the end of the week? (Lesson 1-5)

15 Weeks to the Test

Monday

1. **Extended Response** The distances from the sun to various planets are shown in the table at the right. (Lesson 2-9)

Part A Write each distance in standard form.

Part B Order the distances of the planets from closest to the sun to farthest from the sun. Explain how you determined which planet was closest.

Planet	Distance from the Sun (miles)
Earth	9.3×10^7
Mars	1.42×10^8
Mercury	3.6×10^7
Pluto	3.6×10^9

Source: Time Almanac for Kids

Tuesday

2. **Multiple Choice** What is the value of $\sqrt{81}$? (Lesson 3-1)
- Ⓐ 3
Ⓑ 7
Ⓒ 9
Ⓓ 12
3. **Multiple Choice** The highest point in the state of New York is Mount Marcy at an elevation of 5,344 feet above sea level. An eagle takes off from the peak of Mount Marcy and descends 1,450 feet. At what elevation is the eagle? (Lesson 1-5)
- Ⓕ 3,656 feet
Ⓖ 3,894 feet
Ⓗ 4,282 feet
Ⓙ 6,794 feet

Wednesday

4. **Multiple Choice** The state of New York is 330 miles long and 283 miles wide. What is the difference between the state's length and width? (Lesson 1-5)
- Ⓐ 47 miles
Ⓑ 117 miles
Ⓒ 383 miles
Ⓓ 613 miles
5. **Multiple Choice** Which expression represents the statement "Four more than three times a number is ten."? (Lesson 1-7)
- Ⓕ $3n + 4 = 10$
Ⓖ $4(n + 3) = 10$
Ⓗ $3(n + 4) = 10$
Ⓙ $4n + 3 = 10$

Thursday

6. **Short Response** One ton is equal to 2,000 pounds. How many tons are there in 50,000 pounds of bricks? Show your work. (Prerequisite Skill 3, page 604)

Friday

7. **Short Response** To change the temperature in degrees Celsius to degrees Fahrenheit, multiply the temperature in Celsius C by 1.8 and add 32 to the product. Write a formula that can be used for changing degrees Celsius into degrees Fahrenheit. (Lesson 1-7)

14 Weeks to the Test

Monday

1. **Extended Response** Use the conversion table to answer each question. (Prerequisite Skill 3, page 604)

Part A An excavation crew is able to clear about 220 pounds of dirt each minute. At this rate, how many tons of dirt can they clear in an hour? Show your work.

Part B A 30-pound shipping palette holds 800 20-ounce boxes of cereal. How many pounds do the palette and the cereal weigh altogether? Show your work.

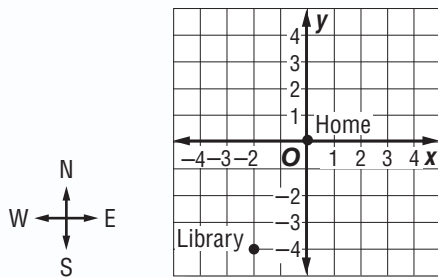
Units of Mass
1 pound = 16 ounces
1 ton = 2,000 pounds
1 kilogram = 1,000 grams

Tuesday

2. **Multiple Choice** The players on the Cougars basketball team made 121 out of 151 free throw attempts this season. Which is the best estimate for their percent of successful free throws? (Lesson 5-5)

(A) about 60% (B) about 70%
(C) about 80% (D) about 90%

3. **Multiple Choice** To get from his home at (0, 0) on the coordinate grid to the library, Paul rides his bike 1 block east, 4 blocks south, and 3 blocks west. What are the coordinates of the library? (Lesson 3-6)



(F) (-4, -2) (G) (-2, -4)
(H) (4, -2) (J) (2, -4)

Wednesday

4. **Multiple Choice** Which is the name for a non-repeating, non-terminating decimal? Select the most appropriate answer. (Lesson 3-3)

(A) an irrational number
(B) a natural number
(C) a rational number
(D) a complex number

5. **Multiple Choice** New York is the nation's second leading producer of apples. The state produces about 2.5×10^7 bushels of apples each year. How many bushels of apples are produced each year? (Lesson 2-9)

(F) 2.5 million bushels
(G) 25 million bushels
(H) 250 million bushels
(J) 2.5 billion bushels

Thursday

6. **Short Response** Next year a shoe company expects to be within 5% of this year's sales volume. This year the company had \$15.8 million in sales. Between which two numbers might next year's sales figures fall? (Lesson 5-6)

Friday

7. **Short Response** Chloe earns \$6.75 per hour at her part-time job. She earns \$4.50 per hour less than twice what Megan earns per hour. Write an equation that can be used to determine how much Megan earns per hour. (Lesson 1-7)

13 Weeks to the Test

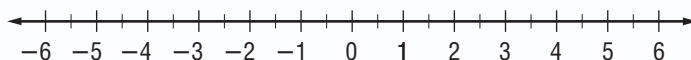
Monday

1. **Extended Response** Examine the list of numbers below. (Lesson 3-3)

$$-2, 0.\bar{3}, 1\frac{7}{8}, 2\pi, 0.7, -\sqrt{7}$$

Part A Which numbers in the list are irrational? Explain your answer.

Part B Place each number on a number line. Explain how you determined where to place the irrational numbers.



Tuesday

2. **Multiple Choice** Which is the best unit for measuring the mass of a car? (Prerequisite Skill)
- A kilograms
 - B grams
 - C centigrams
 - D milligrams
3. **Multiple Choice** In the year 2004, 255,000 gallons of maple syrup were produced in the state of New York. How many quarts are in 255,000 gallons? (Prerequisite Skill 3, page 604)
- F 63,750
 - G 127,500
 - H 510,000
 - J 1,020,000

Wednesday

4. **Multiple Choice** Trung made 4 gallons of punch for a reception. How many pints of punch did he make? (Prerequisite Skill 3, page 604)
- A 2
 - B 8
 - C 16
 - D 32
5. **Multiple Choice** What is the approximate weight of your math textbook? (Prerequisite Skill)
- F about 3 pounds
 - G about 9 pounds
 - H about 12 ounces
 - J about 200 grams

Thursday

6. **Short Response** Gina bought hot dogs and buns for a cookout. The hot dogs came in packages of 10, and the buns came in packages of 8. What was the smallest number of hot dogs and buns she could buy to have the same number of each? Explain your answer. (Prerequisite Skill 9, page 612)

Friday

7. **Short Response** There were 1,184 pounds of apples harvested from one orchard, 985 pounds from another, and 1,240 pounds from a third orchard. The apples were shipped in crates that hold 18 pounds each. Should 100, 200, or 300 crates have been ordered? Explain. (Lesson 5-5a)

12 Weeks to the Test

Monday

1. **Extended Response** Examine the list of numbers below. (Lesson 3-2)

$$\sqrt{65}, \sqrt{16}, \sqrt{28}, \sqrt{121}, \sqrt{55}$$

Part A Which numbers in the list have integer square roots? Explain your answer.

Part B For each number in the list that does not have integer square roots, determine between which two integers its positive square root lies.

Part C For each number in the list that does not have integer square roots, use a calculator to find its square root to the nearest hundredth.

Tuesday

2. **Multiple Choice** Which tool should be used to measure the mass of a rock? (Prerequisite Skill)

- A a beaker
- B a ruler
- C a scale
- D a thermometer

3. **Multiple Choice** Jorge's square living room has an area of 225 square feet. What are the dimensions of the room? (Lesson 3-1)

- F 12 feet by 12 feet
- G 13 feet by 13 feet
- H 14 feet by 14 feet
- J 15 feet by 15 feet

Wednesday

4. **Multiple Choice** A quadrilateral has three interior angles with measures of 85 degrees, 112 degrees, and 63 degrees. What is the measure of the fourth angle? (Lesson 6-4)

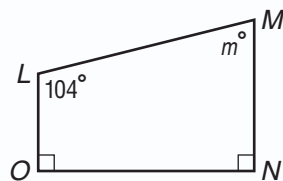
- A 90 degrees
- B 100 degrees
- C 150 degrees
- D 200 degrees

5. **Multiple Choice** Which of the following is the most reasonable estimate for the mass of a cow? (Prerequisite Skill)

- F 10 kilograms
- G 150 kilograms
- H 600 kilograms
- J 5,000 kilograms

Thursday

6. **Short Response** Find the value of m in quadrilateral $LMNO$. Explain how you found your answer and show your work. (Lesson 6-4)



Friday

7. **Short Response** New York has a state sales tax rate of 4.25%. Brittany plans to buy a printer for \$149.99, two packs of paper for \$4.79 each, and a desk for \$289.99. She brought \$460 to the store with her. Did she bring enough money? Explain your answer and show your work. (Lesson 5-3)

11 Weeks to the Test

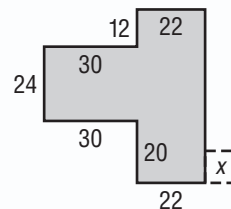
Monday

1. **Extended Response** The floor plan of Max's new house is shown. All measurements are shown in feet. (Lesson 7-3)

Part A Explain how to compute the area of the house.

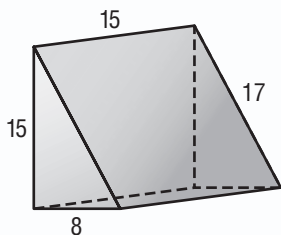
Part B Compute the area of the house.

Part C If a 10 foot by 10 foot storage shed is added to the house at the X, how will the area of the entire structure be affected?



Tuesday

2. **Multiple Choice** What shapes are the faces of the right triangular prism? (Lesson 7-4)



- A triangles and rhombuses
 B triangles and circles
 C triangles and rectangles
 D triangles, rectangles, and pentagons
3. **Multiple Choice** Which expression is equal to 0.01? (Lesson 2-8)
- F 10^{-3} G 10^{-2}
 H 1^{-2} J 0.1^{-3}

Wednesday

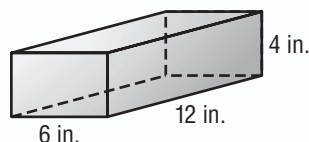
4. **Multiple Choice** In 1950, the population of New York was about 1.48×10^7 . By 2000, this number had grown to about 1.9×10^7 people. What was the increase in population? (Lesson 2-9)
- A about 0.42×10^6 people
 B about 4.2×10^6 people
 C about 4.2×10^7 people
 D about 42×10^7 people
5. **Multiple Choice** Which type of three-dimensional figure can be formed using only squares and rectangles? (Lesson 7-4)
- F a cone
 G a rectangular prism
 H a rectangular pyramid
 J a triangular prism

Thursday

6. **Short Response** The circumference of a circular ice skating rink is 150 feet. What is the radius of the skating rink to the nearest tenth? Explain your answer. (Lesson 7-2)

Friday

7. **Short Response** Explain in words how to find the volume of a rectangular prism. What is the volume, in cubic inches, of the shoebox below? (Lesson 7-5)



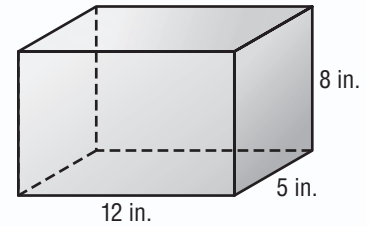
10 Weeks to the Test

Monday

1. **Extended Response** Melanie is wrapping her brother's birthday present in the box shown. (Lessons 7-5 and 7-7)

Part A What is the volume of the box? Show your work.

Part B How much wrapping paper will Melanie need to completely cover every side of the box and not have any wasted paper? Show your work.



Tuesday

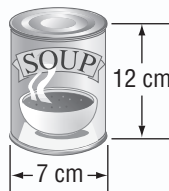
2. **Multiple Choice** The Statue of Liberty, on Liberty Island in New York Harbor, has a mass of about 450,000 pounds. How many tons does the statue weigh? (Prerequisite Skill 3, page 604)
- A 450
 - B 225
 - C 200
 - D 175
3. **Multiple Choice** Where is the number $\sqrt{6}$ located on a number line? (Lesson 3-3)
- F between 2 and 2.5
 - G between 2.5 and 3
 - H between 3 and 3.5
 - J between 3.5 and 4

Wednesday

4. **Multiple Choice** In which quadrant is the ordered pair $(-2, 7)$ located? (Lesson 3-6)
- A Quadrant I
 - B Quadrant II
 - C Quadrant III
 - D Quadrant IV
5. **Multiple Choice** Miguel is making a stone pedestal shaped like a rectangular prism for an award. The dimensions of the prism are 4.8 inches by 5.1 inches by 5.1 inches. Which is a good estimate for the surface area of the pedestal? (Lesson 7-7)
- F about 25 square inches
 - G about 75 square inches
 - H about 125 square inches
 - J about 150 square inches

Thursday

6. **Short Response** Approximately how much paper is needed to make a label that will completely cover the sides of the soup can? (Lesson 7-7)



Friday

7. **Short Response** The cover for Ben's circular swimming pool has an area of about 452.4 square feet. What is the diameter of the pool to the nearest foot? Show your work. (Lesson 7-2)

9 Weeks to the Test

Monday

1. **Extended Response** Geraldo works at the school bookstore. Yesterday morning he surveyed every 10th student walking into school about which color folder each favored. (Lesson 8-7)
- Part A** What sampling method did Geraldo use? Will this method likely be biased or unbiased? Explain.
- Part B** What percent of the students preferred red folders?
- Part C** Geraldo is going to order 500 folders. How many red folders should he order? Explain.

Folder Color	Number of Students
white	8
blue	15
red	12
yellow	5

Tuesday

2. **Multiple Choice** Naomi surveyed a random sample of 80 students at her school and found that 50 of them ride the bus to school each day. If a student at the school is selected at random, what is the probability that he or she rides the bus? (Lesson 8-6)
- A 0.375
- B 0.425
- C 0.55
- D 0.625
3. **Multiple Choice** Which expression is equivalent to $3^4 \times 3^8$? (Lesson 2-8)
- F 3^2
- G 3^4
- H 3^{12}
- J 3^{32}

Wednesday

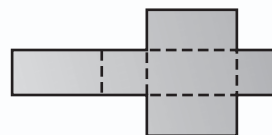
4. **Multiple Choice** A drawer contains 5 red pencils, 7 blue pencils, 3 green pencils, and 10 black pencils. If a pencil is chosen at random, what is the probability that it will be black? (Lesson 8-1)
- A 10%
- B 20%
- C 25%
- D 40%
5. **Multiple Choice** Between which two numbers does $\sqrt{90}$ lie on a number line? (Lesson 3-2)
- F between 9 and 10
- G between 10 and 11
- H between 11 and 12
- J between 12 and 13

Thursday

6. **Short Response** In 2003, there were about 18,600,000 people living in New York, of which about 2,340,000 were age 65 or older. Suppose a New York resident was selected at random. What is the probability that he or she was age 65 or older? Express the probability as a percent. (Lesson 8-6)

Friday

7. **Short Response** What kind of figure will you form if you fold the net shown below along its dotted lines? What shapes make up the figure's faces? (Lesson 7-7a)



8 Weeks to the Test

Monday

1. **Extended Response** Willard thinks that if he rolls two number cubes, the sum of the rolls will usually be greater than 7. (Lesson 8-6)

Part A Describe an experiment that Will can perform to test his hypothesis.

Part B What is the theoretical probability of rolling a sum greater than 7 with two number cubes?

Part C Will rolled two number cubes 100 times and recorded the results. He rolled a sum greater than 7 on 45 of the trials. Does this agree with the theoretical probability? Explain.

Sums	1	2	3	4	5	6
1	2	3	4	5	6	7
2	3	4	5	6	7	8
3	4	5	6	7	8	9
4	5	6	7	8	9	10
5	6	7	8	9	10	11
6	7	8	9	10	11	12

Tuesday

2. **Multiple Choice** A horse trainer made a large circle using a 200-foot long section of rope. What is the radius of the circular area, to the nearest tenth? (Lesson 7-2)

- (A) 23.2 feet
- (B) 31.8 feet
- (C) 44.5 feet
- (D) 63.7 feet

3. **Multiple Choice** Which of the following is a unit of mass? (Prerequisite Skill 4, page 606)

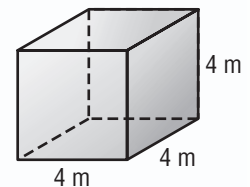
- (F) centimeters
- (G) liters
- (H) milligrams
- (J) pints

Wednesday

4. **Multiple Choice** The state fish of New York is the Brook Trout. James caught a Brook Trout that weighed 1,650 grams. What was the weight of the fish in kilograms? (Prerequisite Skill 4, page 606)

- (A) 165 kilograms
- (B) 16.5 kilograms
- (C) 1.65 kilograms
- (D) 0.165 kilograms

5. **Multiple Choice** What is the volume of the cube? (Lesson 7-5)



- (F) 128 cubic meters
- (G) 96 cubic meters
- (H) 64 cubic meters
- (J) 12 cubic meters

Thursday

6. **Short Response** To determine the favorite leisure activity of people in her hometown, Katie surveyed the first 25 golfers to arrive at a golf course on a Saturday morning. What kind of sample does this represent? Will the results of Katie's survey likely be biased or unbiased? Explain. (Lesson 8-7)

Friday

7. **Short Response** A piggy bank contains 7 New Jersey quarters, 11 New York quarters, and 3 Delaware quarters. If a coin is selected at random from the bank, is it more likely to be a New York quarter than another state quarter? Explain. (Lesson 8-7)

7 Weeks to the Test

Monday

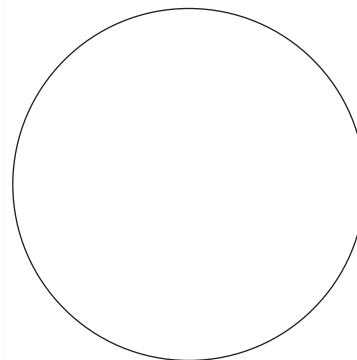
1. **Extended Response** Chris wants to plot his monthly expenses in a circle graph. The portion of his budget that pays each expense is as follows: rent, 35%; car, 20%; utilities, 15%; food and entertainment, 20%; other, 10%. (Lesson 9-2)

Part A Find the number of degrees of the central angle for each section of the circle graph.

Part B Use your protractor to draw the central angles represented in Part A. Label each section.

Part C If Chris' monthly budget is \$1,800, how much is his rent each month?

Chris' Budget



Tuesday

2. **Multiple Choice** Maria earned scores of 9, 10, 6, 10, and 7 on her math quizzes this year. Which measure of central tendency will make her scores seem the greatest? (Lessons 9-4 and 9-5)

(A) mean (B) median
(C) mode (D) range

3. **Multiple Choice** The state bird of New York is the Eastern Bluebird, which has a wingspan of up to 33 centimeters. Suppose 5 Eastern Bluebirds have wingspans of 27, 32, 32, 29, and 30 centimeters. What is the range of the data? (Lesson 9-5)

(F) 32 centimeters
(G) 27 centimeters
(H) 8 centimeters
(J) 5 centimeters

Wednesday

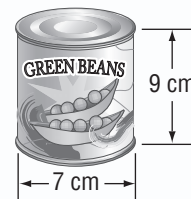
4. **Multiple Choice** What is the range of the following set of data?

{11, 19, 7, 10, 6, 5, 12}

(Lesson 9-5)

(A) 19 (B) 17
(C) 14 (D) 5

5. **Multiple Choice** About how many cubic centimeters of green beans will fit in the can shown at the right? (Lesson 7-5)



(F) 346 cubic centimeters
(G) 310 cubic centimeters
(H) 272 cubic centimeters
(J) 245 cubic centimeters

Thursday

6. **Short Response** Last week there were 3, 1, 5, 1, and 6 absent students at Milton Middle School. Which measure of central tendency makes the absentee rate appear as low as possible? Explain. (Lesson 9-4)

Friday

7. **Short Response** Denise wants to survey her fellow students about their favorite snack food. She plans to gather a sample by randomly surveying students in the cafeteria at lunchtime. Is this a good way for her to collect data? Explain. (Lesson 8-7)

6 Weeks to the Test

Monday

1. **Extended Response** An employment recruiter claims that the average monthly income of her salespeople is over \$4,000. A table of her salespeople and their monthly income is shown at the right.

Salesperson	Monthly Income
Jessica	\$3,200
Eric	\$3,550
Raul	\$3,750
Lynn	\$6,500
Gregory	\$3,400

- Part A** What are the mean, median, and mode of the monthly incomes shown in the table? (Lesson 9-4)
- Part B** Which measure of central tendency did the employment recruiter use to make her claim? (Lesson 9-4)
- Part C** Explain why the recruiter's claim might be considered misleading. What is a more accurate statistic? (Lesson 9-7)

Tuesday

2. **Multiple Choice** The range of the ages in a dance class is 15 years. Which of the following could be the ages of the oldest and youngest students? (Lesson 9-5)
- A 44 years old and 30 years old
- B 38 years old and 23 years old
- C 36 years old and 25 years old
- D 31 years old and 20 years old
3. **Multiple Choice** The lowest temperature ever recorded in New York was -52 degrees at Old Forge in February of 1979. The highest temperature ever recorded was 108 degrees at Troy in July of 1926. What is the difference between these two extreme temperatures? (Lesson 1-5)
- F 56 degrees
- G 140 degrees
- H 160 degrees
- J 182 degrees

Wednesday

4. **Multiple Choice** A polling company used a computer to randomly dial phone numbers in the United States. What kind of sampling method does this represent? (Lesson 8-7)
- A convenience sampling
- B random sampling
- C stratified sampling
- D systematic sampling
5. **Multiple Choice** A bowl contains 4 blue tiles, 9 green tiles, 7 yellow tiles, 2 white tiles, and 5 black tiles. Suppose one tile is selected at random. What color tile has the best probability of being selected? (Lesson 8-1)
- F black
- G blue
- H green
- J yellow

Thursday

6. **Short Response** The volume of a rectangular prism is 480 cubic inches. If you know that the length is 12 inches and the height is 5 inches, explain how you can find the width. What is the width of the prism? (Lesson 7-5)

Friday

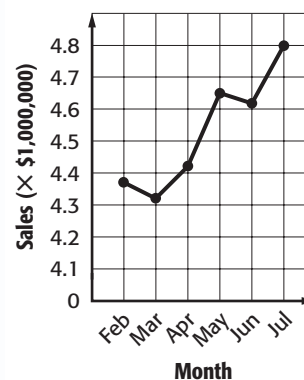
7. **Short Response** Give an example of a survey that collects data using convenience sampling. Will the sampling method likely result in a biased or an unbiased sample? Explain. (Lesson 8-7)

5 Weeks to the Test

Monday

1. **Extended Response** The line graph shows the sales figures of a company over a 6-month period. (Lesson 9-7)
- Part A** Explain how the line graph might be considered misleading. How could this be fixed?
- Part B** What invalid conclusion might someone draw when looking at the line graph?
- Part C** How could the graph be redrawn so that it is not as misleading?

Monthly Sales Figures



Tuesday

2. **Multiple Choice** The letters from the word EMPLOYEE are written on slips of paper and put into a bowl. Two letters are drawn from the bowl. If the same letter is drawn from the bowl, all employees get an extra week of vacation. What is the probability that the employees will win an extra week of vacation? (Lesson 8-5)
- (A) $\frac{1}{56}$ (B) $\frac{3}{56}$
 (C) $\frac{3}{28}$ (D) $\frac{3}{8}$
3. **Multiple Choice** The state mammal of New York is the beaver. The inequality $m - 4 \leq 11$ represents the number of minutes a beaver can swim under water. What is the value of m ? (Lesson 10-6)
- (F) $m < 15$ (G) $m > 15$
 (H) $m \leq 15$ (J) $m \geq 15$

Wednesday

4. **Multiple Choice** Which number line shows the solution to the inequality $n + 6 \geq 7$? (Lesson 10-6)
- (A)
- (B)
- (C)
- (D)
5. **Multiple Choice** What is the value of $\sqrt{49}$? (Lesson 3-1)
- (F) 7
 (G) 8
 (H) 12
 (J) 14

Thursday

6. **Short Response** Mrs. Hern opened a bank account with \$200. She deposited two equal paychecks. After the deposit, the total in her account was \$1,500. Write an equation and find the amount of each of the paychecks. (Lesson 10-3)

Friday

7. **Short Response** Ricardo tosses a coin twice. List the possible outcomes for this experiment. (Lesson 8-2)

4 Weeks to the Test

Monday

1. **Extended Response** The ages of the girls on a gymnastic team are: 12, 15, 13, 12, 16, 15, 14, 16, 15, 13, 12, 18, 11, 16. (Lesson 9-3)
- Part A** Identify an appropriate data display to show the data. Explain your choice.
- Part B** Draw a display of the data.

Tuesday

2. **Multiple Choice** A cheetah drank 3 gallons of water. How many pints of water did the cheetah drink? (Prerequisite Skill 3, Page 604)
- A 0.125
- B 6
- C 12
- D 24
3. **Multiple Choice** Which are appropriate intervals to use to make a frequency table of the following test scores? (Lesson 9-1a)
- 93 72 65 88 90 82 78 67 82 73 69 93 85 80
- F 60–70, 70–80, 80–90, 90–100
- G 70–79, 80–89, 90–99
- H 65–74, 75–84, 85–94
- J 61–70, 71–80, 81–90

Wednesday

4. **Multiple Choice** Joe is buying a new computer system. He has narrowed his choices to 4 different computers, 3 different monitors, and 5 different printers. How many ways are there for Joe to choose his new system? (Lesson 8-2)
- A 12
- B 60
- C 120
- D $5! \times 4! \times 3!$
5. **Multiple Choice** There are 12 boys and 13 girls in Miss Washington's homeroom. Suppose one student is chosen at random to collect homework. What is the probability of a boy being selected? (Lesson 8-1)
- F 0.52
- G 0.48
- H 0.36
- J 0.25

Thursday

6. **Short Response** Give an example of an irrational number that is between 7 and 8 on a number line. Explain how you found your answer. (Lesson 3-3)

Friday

7. **Short Response** The standard state license plates of New York consist of three letters followed by four digits. Assuming all letter/number arrangements are possible, how many different license plates are possible? (Lesson 8-2)



3 Weeks to the Test

Monday

1. **Extended Response** The table shows the number of pars that Pablo shot in his last fifteen rounds of golf. (Lessons 9-4 and 9-7)

Part A Pablo says that he usually makes 7 pars per round.

Which measure of central tendency is he using?

Part B Explain why Pablo's statement is misleading.

Part C What measure of central tendency more accurately describes Pablo's performance?

Pablo's Pars Made				
4	6	3	2	5
2	7	4	5	3
5	7	1	2	7

Tuesday

2. **Multiple Choice** What is the value of the function $f(x) = 9 - 4x$ when $x = -2$? (Lesson 11-2)

- Ⓐ 1
Ⓑ 3
Ⓒ 11
Ⓓ 17

3. **Multiple Choice** The linear function $f(w) = 15w + 250$ tells how much money is in Ana's savings account after w weeks. How much is in her account after 5 weeks? (Lesson 11-2)

- Ⓕ \$325
Ⓖ \$265
Ⓗ \$125
Ⓙ \$75

Wednesday

4. **Multiple Choice** Suppose it was 12 degrees in the afternoon, but the temperature dropped 19 degrees overnight. What was the overnight low temperature? (Lesson 1-5)

- Ⓐ -21 degrees
Ⓑ -7 degrees
Ⓒ -5 degrees
Ⓓ 7 degrees

5. **Multiple Choice** By 2004, the New York Yankees had appeared in the World Series 39 times and won 26 times. Based on this data, what is the experimental probability that the Yankees will win a World Series the next time they make it to the World Series? (Lesson 8-6)

- Ⓕ about 66.7%
Ⓖ about 60%
Ⓗ about 40%
Ⓙ about 33.3%

Thursday

6. **Short Response** The area of a circle is approximately 19.625 square centimeters. What is the approximate circumference of the circle? Explain how you determined your answer. (Lesson 7-2)

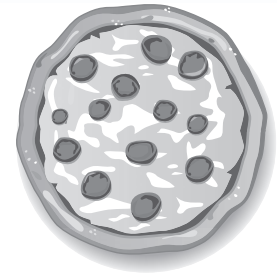
Friday

7. **Short Response** Haley stated that the height of the Statue of Liberty from its base to the torch was 150 feet, give or take 3 feet. In 1984, the height was measured at 152 feet 2 inches. Was Haley correct? Explain. (Prerequisite Skill)

2 Weeks to the Test

Monday

1. **Extended Response** A large pizza at Gino's Pizzeria has an area of about 154 square inches. (Lesson 7-2)
- Part A** What is the diameter of a large pizza? Round to the nearest whole inch.
- Part B** A medium pizza at Gino's has a diameter that is 2 inches smaller than a large pizza. How much greater is the area of a large pizza?



Tuesday

2. **Multiple Choice** The table shows the amount Thomas charges based on the number of hours he works as a landscape designer. Which function rule best represents the data? (Lesson 11-2)

Hours (x)	Total Charge $f(x)$
1	\$18
2	\$36
5	\$90
8	\$144

- Ⓐ $f(x) = 18x$ Ⓑ $f(x) = x + 18$
 Ⓒ $f(x) = x - 36$ Ⓓ $f(x) = 36x$
3. **Multiple Choice** During their 80 home games in 2004, the New York Mets had about 2,320,000 fans in attendance. What was the mean number of fans in attendance at each game? (Lesson 9-4)
- Ⓕ 1,158
 Ⓖ 27,875
 Ⓗ 29,000
 Ⓙ 92,615

Wednesday

4. **Multiple Choice** The nonlinear function $f(t) = -16t^2 + 128t$ gives the height, in feet, of a toy rocket t seconds after it was launched into the air. What is the height of the rocket after 4 seconds? (Lesson 12-2)
- Ⓐ 64 feet
 Ⓑ 128 feet
 Ⓒ 256 feet
 Ⓓ 320 feet
5. **Multiple Choice** The ages of the players on Olivia's softball team are 12, 14, 13, 13, 12, 11, 12, 12, 13, 14, 13, 14, and 12 years. What is the range in the ages of the players? (Lesson 9-5)
- Ⓕ 14 years
 Ⓖ 7 years
 Ⓗ 4 years
 Ⓙ 3 years

Thursday

6. **Short Response** Find the value of the expression below. (Lesson 1-6)
- $$-64 \div 8 \times -2$$

Friday

7. **Short Response** Write 10^{-2} as a decimal and then as a fraction. (Lesson 2-8)

1 Week to the Test

Monday

1. **Extended Response** A surveyor stands outside the gates of a popular amusement park asking questions of the people entering. (Lesson 8-7)
- Part A** The attendance for the day was 312,000. If the surveyor questioned every 1,000th person entering the gates, how many people were surveyed?
- Part B** Based on the responses, the surveyor concluded that 98% of the people in the state enjoy the amusement park. Is this a valid conclusion? Explain your reasoning.

Tuesday

2. **Multiple Choice** The Brooklyn Bridge crosses New York City's lower East River to connect Brooklyn and Manhattan. The total length of the bridge is almost 6,000 feet. Which of the following shows the length of the bridge in scientific notation? (Lesson 2-9)
- (A) 60×10^3 feet
 (B) 6×10^2 feet
 (C) 6×10^3 feet
 (D) 6×10^4 feet
3. **Multiple Choice** A jar contains three red, four blue, and six yellow jellybeans. What is the probability that Eric selects two blue jellybeans from the jar if he picks the second jellybean without putting the first one back? (Lesson 8-5)
- (F) $\frac{1}{13}$ (G) $\frac{4}{39}$
 (H) $\frac{1}{4}$ (J) $\frac{12}{169}$

Wednesday

4. **Multiple Choice** The table shows the amount an electrician charges a customer for various amounts of time. Which equation represents the total charges c for a number of hours h ? (Lesson 10-3)

Hours (h)	Total Charge (c)
2	\$126
3	\$174
5	\$270

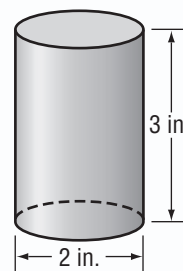
- (A) $c = h + 30$ (B) $c = 48h + 30$
 (C) $c = 78h$ (D) $c = 30h + 48$
5. **Multiple Choice** What is the quotient of 54 and (-6) ? (Lesson 1-6)
- (F) 9
 (G) -4
 (H) -8
 (J) -9

Thursday

6. **Short Response** Latoya is trying to save \$75 for a class trip to visit Niagara Falls. She has \$45 now and can save \$6 per week. How many weeks will it take Latoya to save enough for her trip? Explain your answer. (Lesson 10-3)

Friday

7. **Short Response** What is a reasonable estimate for the surface area of the cylinder? Explain how you found your answer. (Lesson 7-7)



Mathematics Reference Sheet—Grade 7

CONVERSIONS

1 centimeter = 10 millimeters
 1 meter = 100 centimeters = 1,000 millimeters
 1 kilometer = 1,000 meters

1 gram = 1,000 milligrams
 1 kilogram = 1,000 grams

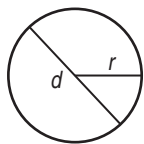
1 pound = 16 ounces
 1 ton = 2,000 pounds

1 cup = 8 fluid ounces
 1 pint = 2 cups
 1 quart = 2 pints
 1 gallon = 4 quarts

1 liter = 1,000 milliliters
 1 kiloliter = 1,000 liters

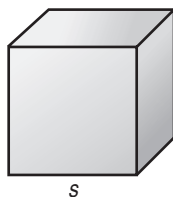
FORMULAS

Circle



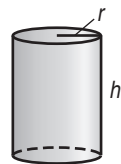
Area = πr^2
 Circumference = $2\pi r$

Cube



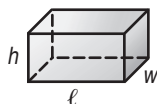
Total Surface Area = $6s^2$
 Volume = s^3

**Right
Circular
Cylinder**



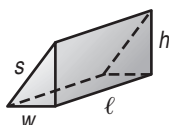
Total Surface Area = $2\pi r h + 2\pi r^2$
 Volume = $\pi r^2 h$

**Right
Rectangular
Prism**



Total Surface Area = $2(w\ell) + 2(\ell h) + 2(wh)$
 Volume = ℓwh

**Right
Triangular
Prism**



Total Surface Area = $wh + \ell w + \ell h + \ell s$
 Volume = $\frac{1}{2}wh \times \ell$