

1. (7NS3)

The table shows prices for shoe rental, games, and snacks at the bowling alley.

BOWLING ALLEY PRICES

Item	Price
Shoe rental	\$2.75
One game of bowling	\$2.50
Small soda	\$0.95
Large soda	\$1.50
Nachos	\$1.75

Gina rented shoes, bowled 3 games, and bought 1 order of nachos. She used a coupon for $\frac{1}{2}$ off the price of her bowling games. What was Gina's total cost before tax was added?

- A \$5.75 B \$6.00 C \$8.25 D \$12.00

2. (7NS2a)

What is the value of the expression below?

$$\left(-\frac{5}{8}\right) \times \left(3\frac{1}{2}\right)$$

- A $3\frac{5}{16}$ B $2\frac{3}{16}$ C $-2\frac{3}{16}$ D $-3\frac{5}{16}$

3. (7RP.1)

A crew of highway workers paved $\frac{2}{15}$ mile in 20

minutes. If they work at the same rate, what portion of a mile will they pave in one hour?

- A $\frac{1}{150}$ B $\frac{2}{45}$ C $\frac{2}{5}$ D $\frac{5}{2}$

4. (7RP.3)

Ashley completed reading a history assignment in 4 days. On Monday, she read 16 pages. For each of the next 3 days, the number of pages she read increased by 50% over the number of pages she read on the previous day. Greg read the same history assignment, but he read an equal number of pages per day from Monday through Friday. How many pages did Greg read per day for the 5 days?

- A 12.8 B 20 C 26 D 32.5

5. (7EE.1)

Which expression is equivalent to $(7x - 5) - (3x - 2)$?

- A $10x - 7$ B $10x - 3$ C $4x - 7$ D $4x - 3$

6. (7RP.3)

Patel bought a model rocket kit from a catalog. The price of the kit was \$124.95. The state sales tax of 7% was added, and then a \$10 charge for shipping was added after the sales tax. What was the total amount Patel paid, including tax and shipping cost?

Show your work.

Answer \$ _____

Patel received an allowance of \$15 per week. How many weeks will it take him to purchase the kit?

Show your work.

Answer _____ weeks

7. (7EE3)

Ms. Donaldson earns \$18.80 per hour for the first 40

hours she works in a week. She earns $1\frac{1}{2}$ times that

amount per hour for each hour beyond 40 hours in a week. Last week Ms. Donaldson worked 45.5 hours.

How much money did she earn?

Show your work

Answer \$ _____

A health insurance payment of \$34.55 was deducted from Ms. Donaldson's earnings for the week. After the insurance deduction, payroll taxes equal to 28% of the balance were deducted. What was the amount that Ms. Donaldson received?

Show your work

Answer \$ _____

Name: _____ Grade 7 Test Prep # 2

1.(7NS1a)

Altitude above sea level is given in positive values and below sea level is given in negative values. Which situation describes a hiker in Death Valley stopping at an altitude of 0 feet?

- A) The hiker starts at -10 feet then increases altitude by 10 feet.
- B) The hiker starts at -10 feet then decreases altitude by 10 feet.
- C) The hiker starts at 10 feet then increases altitude by 10 feet.
- D) The hiker starts at 0 feet then decreases altitude by 10 feet.

2. (7RP 3)

The Lions won 16 games last year. This year the Lions won 20 games. What is the percent increase in the number of games the Lions won from last year to this year?

- A 20% B 25% C 80% D 125%

3. (7EE.2)

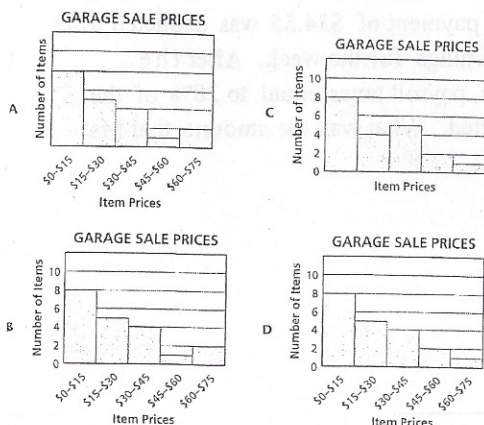
The population of a city is expected to increase by 7.5% next year. If p represents the current population, which expression represents the expected population next year?

- A $1.75p$ B $1.075p$ C $p + 0.075$ D $1 + 0.075$

4. 6SP4) The Grant family had a garage sale. The prices, in dollars, of the items that were sold are shown below.

\$12	\$17	\$32	\$8	\$22
\$5	\$38	\$42	\$11	\$12
\$27	\$25	\$35	\$55	\$13
\$5	\$3	\$26	\$47	\$61

Which graph represents the data?



5. (7G4)

A circle has a radius of 2.6 centimeters. What is the circumference, in centimeters, of the circle?

- A 2.6π B 5.2π C 6.76π D 13.52π

6. (7NS1d)

Graham's monthly bank statement showed the following deposits and withdrawals:

-\$25.20, \$52.75, -\$22.04, -\$8.50, \$94.11

If Graham's balance in the account was \$47.86 at the beginning of the month, what was the account balance at the end of the month?

Show your work

Answer \$ _____

7. (7RP3)

Kelsie sold digital cameras on her web site. She bought the cameras for \$65 each and included a 60% markup to get the selling price. To the nearest dollar, what was the selling price for one camera?

Show your work

Answer \$ _____

1. (7NS2c)

What is the value of the expression below?

$$4\frac{1}{2} \cdot 2\frac{3}{4}$$

- A 2 B 3 C $8\frac{3}{8}$ D $12\frac{3}{8}$

2. (7RP2d)

The relationship between the number of songs downloaded, x , and the total cost, in dollars, of the downloads, y , is represented by a graph drawn in an xy -plane. Points (1, 3) and (4, 12) lie on the graph. What does the ordered pair (4, 12) indicate?

- A 12 downloads that cost \$4 each
 B 4 downloads that cost \$12 each
 C 12 downloads that cost a total of \$4
 D 4 downloads that cost a total of \$12

3. (7EE.4a)

Carmine paid an electrician x dollars per hour for a 5-hour job plus \$70 for parts. The total charge was \$320. Which equation can be used to determine how much the electrician charged per hour?

- A $5x = 320 + 70$ B $5x = 320 - 70$ C $(70 + 5)x = 320$ D $(70 - 5)x = 320$

4. (7G4)

What is the area, in square centimeters, of a circle with a diameter of 12 centimeters?

- A 12π B 24π C 36π D 144π

5. (7SP1)

Cassie rolls a fair number cube with 6 faces labeled 1 through 6. She rolls the number cube 300 times. Which result is most likely?

- A Cassie will roll a 1 or a 2 about 50 times.
 B Cassie will roll a 1 or a 2 exactly 50 times.
 C Cassie will roll an even number about 150 times.
 D Cassie will roll an even number exactly 150 times.

6. (7NS3)

Maxine picked $7\frac{1}{4}$ pounds of blueberries, and Kodi

picked $3\frac{3}{4}$ pounds of blueberries. They want to

package the blueberries into $1\frac{1}{2}$ pound bags to sell

at their family fruit and vegetable stand. What is

the greatest number of $1\frac{1}{2}$ pound bags of

blueberries that they can make?

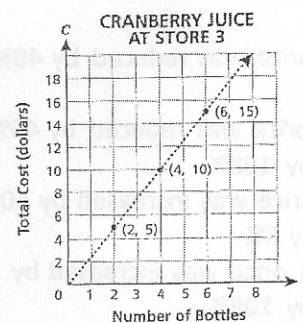
Show your work

Answer _____ bags

7. (7RP2b)

Mr. Lesko compared the cost of bottles of cranberry juice in three stores.

- At Store 1 the total cost, C , of b bottles is given by the equation $C = 2.89b$.
- At Store 2, Mr. Lesko bought 5 bottles of cranberry juice for \$13.75.
- The graph below represents the cost at Store 3



Which of the three stores had the lowest unit rate, in dollars, for a bottle of cranberry juice? Include the unit rate in your answer.

Show your work

Answer Store _____

Unit rate _____

Name: _____

Grade 7 Test Prep # 4

1. (7NS1d)

What is the value of the expression below?

$$\frac{3}{8} + (-\frac{4}{5}) + (-\frac{3}{8}) + \frac{5}{4}$$

- A 0 B $\frac{1}{20}$ C $\frac{9}{20}$ D $2\frac{4}{5}$

2. (7RP.2d)

The relationship between the length of one side of a square, x , and the perimeter of the square, y , can be represented in an xy -plane by a straight line.

Which of the points with coordinates (x, y) lie on the line?

- A (2, 6) B (2, 8) C (6, 2) D (8, 2)

3. (7RP.1): A crew of highway workers paved $\frac{2}{15}$

mile in 20 minutes. If they work at the same rate, what portion of a mile will they pave in one hour?

- A $\frac{1}{150}$ B $\frac{2}{45}$ C $\frac{2}{5}$ D $\frac{5}{2}$

4. (7EE.2)

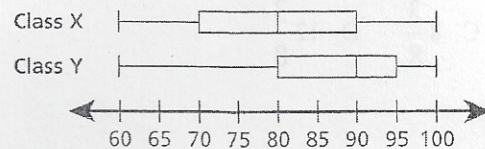
The expression $1.08(0.6p)$ represents the total amount Naomi paid for a jacket originally priced p dollars. Which changes to the original price could have resulted in this expression?

- A The original price was reduced by 40% and then increased by 8%.
 B The original price was reduced by 40% and then increased by 108%.
 C The original price was increased by 60% and then increased by 8%.
 D The original price was increased by 60% and then increased by 108%.

5. (7SP4)

The box plots below show the scores on last week's test for 10 randomly selected students from each of Mr. Brenner's two mathematics classes.

RANDOMLY SELECTED TEST SCORES



Which statement about the performance of the students in the two classes is best supported by the data from these samples?

- A The two classes performed equally well because the range of each class is the same.
 B The two classes performed equally well because the greatest score in each class is the same.
 C The students in Class Y generally performed better than the students in Class X because most students in Class Y had a score greater than 70.
 D The students in Class Y generally performed better than the students in Class X because the median of Class Y is greater than that of Class X.

6. (7NS2d)

Convert $\frac{3}{11}$ to a decimal equivalent using long division.

Show your work

Answer _____

7. (7EE4a)

Mr. Gonzales has only \$42.50 to spend at a clothing store. He wants to buy a shirt that costs \$29, including tax, and some bracelets that cost \$4.50 each, including tax.

Write an equation to determine x , the maximum number of bracelets Mr. Gonzales could buy.

Equation: _____

Solve the equation to determine the number of bracelets Mr. Gonzales could buy.

Show your work

Answer _____ bracelets

Name: _____ Grade 7 Test Prep # 5

1. (7NS3)

Gretchen makes pillows using $1\frac{1}{4}$ yards of fabric per pillow. She has $8\frac{3}{4}$ yards of fabric.

What is the greatest number of pillows Gretchen can make?

- A 4 B 5 C 6 D 8

2. (7RP.2b)

The table shows that the number of miles driven by Sandra is directly proportional to the number of gallons used.

GASOLINE USAGE

Number of Gallons Used	Number of Miles Driven
5	122.5
15	367.5
45	1,102.5

What is the constant of proportionality for this relationship?

- A 0.5 B 3 C 15 D 24.5

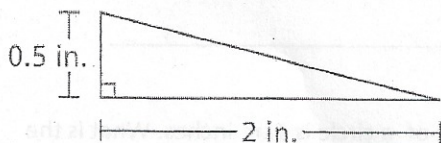
3. (7EE.1)

Which expression is equivalent to $2(3n - 4) - 2(n - 2)$?

- A $4n - 4$ B $4n + 4$ C $8n - 4$ D $8n + 4$

4. (7G1)

The scale drawing below represents the side of a ramp. In the scale drawing, one inch equals three feet.



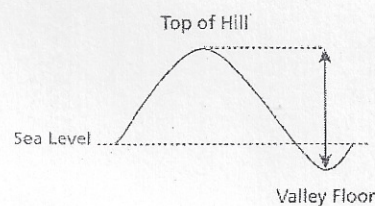
What is the actual area, in square feet, of the side of the ramp?

- A 0.5 B 3 C 4.5 D 9

5. (7SP2): Laticia randomly selected 25% of the seventh-grade students in her school and asked them their favorite season. Of the students surveyed, 51 chose summer as their favorite season. Based on the data, what is the most reasonable prediction of the number of seventh-grade students in her school who would choose summer as their favorite season?

- A 15 B 75 C 150 D 200

6. (7NS3): George hiked from the top of a hill to the valley floor. The elevation at the top of the hill is $127\frac{1}{2}$ feet above sea level. The valley floor is $52\frac{1}{2}$ feet below sea level.



George stopped at a rest stop that is at an elevation exactly halfway between the top of the hill and the valley floor. What is the elevation, in feet, of the rest stop?

Show your work

Answer _____ feet

7. (7RP3): Mrs. Hamilton worked for a real estate agency. She sold a house for \$175,000. The agency's fee for the sale was 4% of the sale price. Mrs. Hamilton received \$4,725 of the agency's fee as her commission. What percent of the agency's fee did Mrs. Hamilton receive? Round your answer to the nearest tenth of a percent.

Show your work

Answer _____ %

Name: _____ Grade 7 Test Prep # 6

1. (7NS3): The 90 members of a service club had the opportunity to vote for club officers on Tuesday or Wednesday.

$\frac{3}{5}$ of the members voted on Tuesday.

$\frac{1}{4}$ of the members who did not vote on Tuesday voted on Wednesday.

How many of the club members did not vote at all?

- A 36 B 27 C 22 D 9

2. (7RP.2a)

The table below shows the dimensions of several parallelograms.

Base (inches)	Height (inches)
10	6
15	9
20	12
25	15

Which pair of dimensions is in the same proportion as each of the pairs shown in the table?

- A base of 30 inches and height of 20 inches
B base of 40 inches and height of 30 inches
C base of 45 inches and height of 27 inches
D base of 48 inches and height of 32 inches

3. (7RP.2b)

Last week Len spent \$18 to bowl 4 games. This week he spent \$27 to bowl 6 games. Len owns his bowling ball and shoes, so he only has to pay for each game that he bowls. If each of these bowling games costs the same amount of money, what is the constant of proportionality between the money spent and the number of games played?

- A 1.5 B 2.0 C 4.5 D 9.0

4. (7EE.3)

David bought a computer that was 20% off the regular price of \$1,080. If an 8% sales tax was added to the cost of the computer, what was the price David paid for it?

- A \$302.40 B \$864.00 C \$933.12 D \$1382.40

5. (7SP1)

The junior high school principal designed a survey to find out which new foods students would buy in the cafeteria. Which method of sampling will help the principal make a valid decision about which foods to add to the lunch menu?

- A Give the survey to every student in the eighth grade.
B Give the survey to every student taking a science class after lunch.
C Give the survey to every student who walks or rides a bicycle to school.
D Give the survey to every third student entering the building in the morning.

6. (7EE.1)

Rewrite in simplest form.

$$5(4c - 2d) + 2d - 6(d - 3c)$$

Simplified form _____

Write the simplified expression in factored form.

Factored form _____

7. (7G4)

The circumference of a circle is 11π inches. What is the area, in square inches, of the circle? Express your answer in terms of π

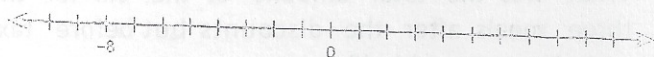
Show your work

Answer _____ square inches

Name: _____ Grade 7 Test Prep # 7

1. (7NS1b)

Which phrase correctly describes the location on the number line of the opposite of -8 ?



- A a point 8 units to the left of -8
- B a point 8 units to the right of -8
- C a point 8 units to the left of 0
- D a point 8 units to the right of 0

2. (7RP.3)

Ashley completed reading a history assignment in 4 days. On Monday, she read 16 pages. For each of the next 3 days, the number of pages she read increased by 50% over the number of pages she read on the previous day. Greg read the same history assignment, but he read an equal number of pages per day from Monday through Friday. How many pages did Greg read per day for the 5 days?

- A 12.8
- B 20
- C 26
- D 32.5

3. (7EE.2)

Leo bought a used car for x dollars. One year later the value of the car was $0.88x$. Which expression is another way to describe the change in the value of the car?

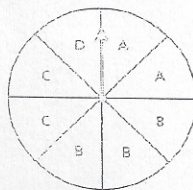
- A 0.12% decrease
- B 0.88% decrease
- C 12% decrease
- D 88% decrease

4. (7G4)

The circumference of a circle is 18π centimeters. What is the area, in square centimeters, of this circle?

- A 9π
- B 36π
- C 81π
- D 324π

5. (7SP6): The spinner below has 8 sectors labeled with letters. Each sector of the spinner below is the same size, as shown.



If the arrow is spun 400 times, how many times would it be expected to land on a sector labeled B?

- A 50
- B 100
- C 150
- D 25

6. (7NS.1): From midnight to 7:00 a.m., the temperature dropped 1.35° each hour. If the temperature at midnight was 10° , what was the temperature at 7:00 a.m.?

Show your work.

Answer _____ $^\circ\text{C}$

7. (7RP.3): A group of friends went to lunch. The bill, before sales tax and tip was \$37.50. A sales tax of 8% was added. The group then tipped 18% on the amount after the sales tax was added. What was the amount, in dollars, of the sales tax?

Show your work.

Answer \$ _____

What was the total amount the group paid, including tax and tip?

Show your work.

Answer \$ _____

Name: _____ Grade 7 Test Prep # 8

1. (7NS1d): Yesterday, the temperature at noon was 11.4°F . By midnight, the temperature had decreased by 15.7 degrees. What was the temperature at midnight?

- A -4.3°F B -11.4°F
C -15.7°F D -27.1°F

2. (7EE1)

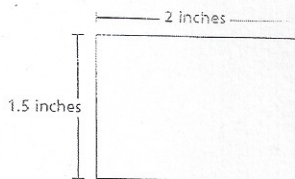
Which expression is equivalent to:

$$4.8 + 2.2w - 1.4w + 2.4?$$

- A $0.4(6 + 2w)$ B $0.8(9 + w)$
C $1.6(3 + 2w)$ D $3.6(2 + w)$

3. (7G1)

The drawing below represents a rectangular garden. In the scale drawing, one inch equals 30 yards.



What is the actual area of the garden?

- A 3 sq yd B 90 sq yd C 210 sq yd
D 2,700 sq yd

4. (7SP5)

A box contains congruent colored cubes.

$\frac{6}{24}$ of the cubes are blue

$\frac{9}{24}$ of the cubes are green

$\frac{7}{24}$ of the cubes are red

$\frac{2}{24}$ of the cubes are yellow

Dina will choose a cube from the box without looking. Which color cube is Dina most likely to choose?

- A blue B green C red D yellow

5. (7RP.3): On Mother's Day, Mr. Olsen took Mrs. Olsen and their daughter, Diane, to a restaurant for dinner. All three ordered the Mother's Day special, regularly priced at \$24.80. Mrs. Olson received a 40% discount for her dinner. Diane's dinner was half price for a child's portion.

What was the total amount of the bill for the three meals after the discounts but before tax and tip were added?

- A \$74.40 B \$52.08
C \$49.60 D \$47.12

6. (7NS.3)

A pine tree measured $40\frac{1}{2}$ feet tall. Over the next $7\frac{1}{2}$ years, it grew to a height of 57 feet. During the $7\frac{1}{2}$ years, what was the average yearly growth rate of the height of the tree?

Show your work.

Answer _____ feet per year

7. (7RP.3)

The local library raised money by having a used book sale. Rebecca volunteered to help. Her task was to stick price labels on each of the 198 books on a bookshelf. In 5 minutes, Rebecca had labeled 18 books. At this rate, what was the total number of minutes Rebecca needed to label all 198 books?

Show your work.

Answer _____ minutes

All 198 books Rebecca labeled were priced at \$1.75 per book. By 4:00 p.m., all but 80 of those books had been sold. What was the total amount of money collected from the sale of these books?

Show your work.

Answer \$ _____

Name: _____ Grade 7 Test Prep # 9

1. (7NS3): The town council had a banquet as a fundraiser for new playground equipment. They sold 250 tickets for a total of \$5,625. The expenses for the banquet were \$6,182.50. What were the results of the town council's banquet?

- A They lost \$2.23 per ticket sold.
- B They made \$1.05 per ticket sold.
- C They lost a total of \$307.50.
- D They made a total of \$557.50.

2. (7RP1): The label on a $1\frac{1}{2}$ pound bag of wildflower seeds states that it will cover an area of 375 square feet. Based on this information, what is the number of square feet that 1 pound of wildflower seeds will cover?

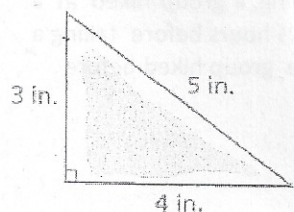
- A $\frac{1}{250}$
- B 250
- C $562\frac{1}{2}$
- D 750

3. (7EE1)

If the perimeter of a square is $14g + 28$ inches, what is the length, in inches, of each side of the square?

- A) $0.5g + 1$
- B) $g + 2$
- C) $2g + 4$
- D) $3.5g + 7$

4. (7G1): The drawing of a road around a lake, shown below, has a scale of 1 inch to 4 kilometers.



What is the total distance, in kilometers, of the actual road?

- A 12
- B 24
- C 48
- D 96

5. (7SP6)

A storeowner made a list of the number of greeting cards sold last month. The store sold 167 thank-you cards, 285 birthday cards, and 56 blank cards. Based on these data, which number is closest to the probability that the next customer will buy a blank card?

- A 0.11
- B 0.33
- C 0.56
- D 0.89

6. (7RP2b): At every game, a school buys bottles of water for its basketball team. The table shows the relationship between the number of bottles bought and the total cost.

BOTTLED WATER SALES

Number of Bottles	Cost (dollars)
1	1.50
2	3.00
3	4.50
4	6.00
5	7.50

If $C = kN$, where C is the cost of N bottles and k is the constant of proportionality, what is the value of k ?

Answer _____

In October, the school bought 150 bottles of water for the basketball team. What was the total cost?

Show your work.

Answer \$ _____

7. (7EE.4a)

Jackie bought 2 packages of paper for \$5.80 each and 4 notebooks for d dollars each. She spent a total of \$32 for the packages of paper and the notebooks. Write an equation, using d that represents the situation above.

Equation _____

Solve your equation and write the cost of 1 notebook in the answer blank.

Show your work.

Answer \$ _____

Jackie returned to the store later that day and bought n more notebooks at the same price. This time she used a store coupon for \$3.50 off her entire purchase. The total she spent was more than \$18. Write an inequality to represent this situation.

Inequality _____

What was the least number of notebooks that Jackie could have bought this time?

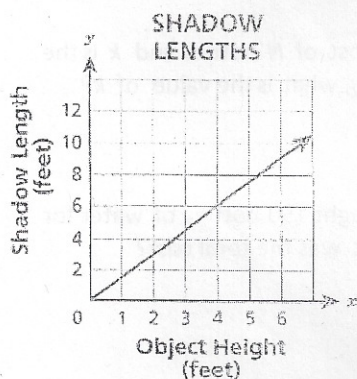
Answer _____ notebooks

Name: _____ Grade 7 Test Prep # 10

1. (7NS3): Scientists determined that Antarctica's average winter temperature was -34.44°C . The difference between this temperature and Antarctica's highest recorded temperature was 49.44 degrees. What was Antarctica's highest recorded temperature?

- A -83.88°C B -15°C C 15°C D 83.88°C

2. (7RP2b): The length of a shadow depends on the height of an object. The graph below represents this relationship.



What is the ratio of shadow length to object height?

- A 1: 2 B 2:1 C 3:2 D 2:3

3. (7RP2c)

The cost of oranges in a grocery store is directly proportional to the number of oranges purchased. Jerri paid \$2.52 for 6 oranges. If p represents the cost, in dollars, and n represents the number of oranges purchased, which equation best represents this relationship?

- A $p = 0.42n$ B $p = 2.52n$ C $p = 6n$ D $p = 15.12n$

4. (7EE3)

Doug earns \$10.50 per hour working at a restaurant.

On Friday he spent $1\frac{3}{4}$ hours cleaning, $2\frac{1}{3}$ hours doing

paperwork, and $1\frac{5}{12}$ hours serving customers. What were Doug's earnings?

- A \$46.97 B \$47.25 C \$53.00 D \$57.75

5. (7G1): The scale of a model train is 1 inch to 13.5 feet. One of the cars of the model train is 5 inches long. What is the length, in feet, of the actual train car?

- A 67.5 B 32.4 C 14.5 D 2.7

6. (7SP7): Cynthia conducted an experiment with a spinner that contained only 4 sectors: F, G, H, and J. She spun the arrow 40 times and recorded the frequencies in the table below.

Letter	Frequency
F	12
G	9
H	15
J	4

Based on the data, what is the probability that the next spin will land on H?

- A $\frac{1}{4}$ B $\frac{1}{3}$ C $\frac{3}{8}$ D $\frac{3}{5}$

7. (7NS.3): On the first day camping, a group hiked at a rate of $2\frac{1}{4}$ miles per hour for $2\frac{1}{2}$ hours before taking a break. How many miles had the group hiked before the break?

Show your work.

Answer _____ miles

The group hiked a total of 17.4 miles on the first day. On the second day, the group hiked a distance 12% more than the total distance hiked on the first day. To the nearest tenth of a mile, how many miles did the group hike on the second day?

Show your work.

Answer _____ miles