5th Grade Numbers & Operations 2014 (Fox5thgrade2014)

Name:_____ Date:_____

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1. **Which number goes into the box to make the statement true?**

$$4,\square 76,192 < 4,578,136$$

A. 7

B. 6

C. 3

D. 8

2.

What is the value of the 7 in 23,078,566,000?

A. 7 million
B. 70 million
C. 78 million
D. 700 million

3.

What is the value of the 3 in 45,089.213?

A. three thousandths
B. three hundredths
C. three tenths
D. thirty

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4. Which is the largest number?

A. 3.800
B. 3.90
C. 3.89
D. 3.09

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5. Which decimal is the greatest?

A. 0.41
B. 1.41
C. 0.14
D. 1.14

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6. What number is equivalent to the expression below?

$$(3 \times 1{,}000{,}000) + (6 \times 10{,}000) + (5 \times 100) + 1$$

A. 3,651

B. 306,501

C. 3,060,501

D. 3,065,001

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7. A company sells bottles of liquid laundry soap. Each bottle contains 150 ounces of laundry soap. Stores can buy boxes of laundry soap with 12 bottles in each box from the company.

Part A
A grocery store ordered 8 boxes of laundry soap. Write an expression that can be used to find the total number of ounces of laundry soap the store ordered.

Part B
What is the value of your expression from Part A? Show your work.

Part C
Look at the digits in the thousands place and the hundreds place of your answer from Part B. What does the digit in the thousands place represent compared to the digit in the hundreds place? Explain your reasoning.

8. The chart shows the distance between Carol's house and each of her friends' houses.

Distance from Carol's House to Her Friends' Houses

Friend	Distance (miles)
Kya	5.3
Orrin	0.58
Paulina	1.56
Juan	5.153

Part A
Juan says Kya lives closer to Carol's house than Orrin because 53 is less than 58. Is Juan's statement true? Explain your answer using place value.

Part B
Juan used a special instrument to measure the distance between his house and Carol's house and found it to be exactly 5.153 miles. Write 5.153 using expanded notation.

Part C
Order Juan's distance from Carol's house and the distances from the chart from least to greatest.

Part D
On Monday, Carol rode her bike to Paulina's house and back once in the morning and again in the afternoon. Then, Carol rode her bike to Orrin's house and back. On Tuesday, Carol rode her bike to Kya's house one way only. Which day did Carol travel farther? Show your work and explain your answer.

9. The table shows the lengths of six covered bridges.

Covered Bridges

Bridge	Length (meters)
Benetka Road Bridge	42.06
Olin's Bridge	35.05
Doyle Road Bridge	28.65
Giddings Road Bridge	32.61
Harpersfield Bridge	69.49
Smolen Gulf Bridge	186.7

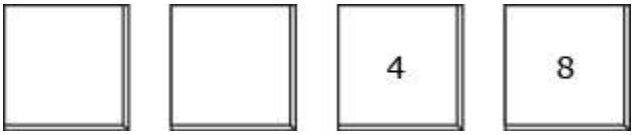
A company plans to build a new covered bridge with a length of 18.6 meters.

Part A
Compare the length of the new covered bridge with the Smolen Gulf Bridge. How does the value of the number 8 in each number differ between the two lengths?

Part B
Use the greater than symbol or the less than symbol to compare the length of Benetka Road Bridge to the length of Olin's Bridge. Explain your answer.

Part C
Megan states that the Smolen Gulf Bridge was 3 times as long as the next longest bridge. Is Megan's statement correct? Explain your answer.

10. Sandy plays a math game. She wins the game by creating a number with the greatest value. She pulls a tile with the number 3 from a bag. She placed the 3 in one of the empty spaces.



Which statement should Sandy consider before she places the tile?

A. The value of the number is ten times greater in the thousands place than the value of the number in the hundreds place.

B. The value of the number is three times greater in the thousands place than the value of the number in the hundreds place.

C. The value of the number is one thousand times greater in the thousands place than the value of the number in the hundreds place.

D. The value of the number is three thousand times greater in the thousands place than the value of the number in the hundreds place.

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11. The chart shows the weights of two different packages.

Package Weights

Package	Weight (pounds)
small	0.193
large	11.4

Part A
In pounds, what is the combined weight of 100 small packages and 10 large packages? Show your work or explain your answer.

Part B
A student knows a rule about multiplying by 10 and moving the decimal point. Which way should the student move the decimal point when multiplying by 10? Explain your answer.

Part C
Shipping Company P charges $1.40 for each pound. What is the total shipping charge for 100 small packages and 10 large packages? What is this value rounded to the nearest dollar? Show your work or explain your answer.

Part D
Shipping Company R wrote the expression shown below to calculate the shipping charge for 100 small packages and 10 large packages.

$$18 + (0.41 \times 100) + (7.99 \times 10)$$

What is the value of this expression? Would it be cheaper to pay $1.40 per pound or to use the expression $18 + (0.41 \times 100) + (7.99 \times 10)$? Show your work or explain your answer.

12. A car-sized robot named “Curiosity” is exploring the surface of Mars. It beamed a song from Mars back to Earth over a distance of approximately 3.3×10^8 miles. The robot also took pictures of a mountain that is approximately 3 miles high.

Part A
How many million miles did the song have to go from Mars back to Earth? Explain your work.

Part B
There are 5,280 feet in a mile. How many feet are equal to 3 miles? Show your work.

13. A teacher gave her class the mass of two rocks. She wrote each mass as an expression using a power of 10.

- The brown rock's mass is 3.56×10^4 grams.

- The gray rock's mass is $43.1 \div 10^3$ grams.

Part A
Write the mass, in grams, of the brown rock in standard form. Explain the number of zeros in your answer and how this number relates to the power of 10 in the expression.

Part B
Write the mass, in grams, of the gray rock in standard form. Explain the location of the decimal point after dividing the decimal by a power of 10.

Part C
Write an inequality that correctly compares the two expressions the teacher wrote.

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14. Carbon makes up 0.032 percent of Earth's crust. Which expression has a value of 0.032?

A. $3.2 \div 10^2$

B. 3.2×10^2

C. $3.2 \div 10^3$

D. 3.2×10^3

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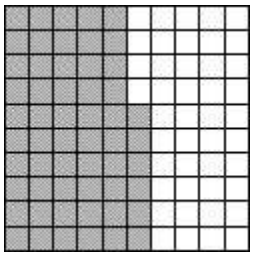
15. If the model is one unit, which decimal is represented by the shaded part?



A. 0.44
B. 0.56
C. 0.64
D. 0.65

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16. Use the decimal numbers 73.129 and 73.184 to answer the questions.

Part A
Determine which number is greater by comparing the digits in the same decimal position. Use the symbols > , = , or < to compare each place value. Which place value tells you which number is smaller?

Part B
Write the smaller number in expanded form. Explain your answer.

Part C
Round each number to the nearest tenth and find the product of the two rounded numbers. Show your work.

Part D
Your classmate works the problem in Part C and then rounds her product to the nearest whole number, 535. Do you agree or disagree with your classmate? If you disagree, explain what your classmate did incorrectly.

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17. The lengths of four rhinoceroses, or rhinos, are shown in the chart.

Lengths of Rhinos

Rhino	Length (meters)
A	3.528
B	3.912
C	3.625
D	3.68

Part A
Which rhino is the longest? Which is the shortest?

A 5 th rhino is longer than the shortest one from the chart, but not as long as the longest rhino. What could be the length of the 5 th rhino? Explain your answer.

Part B
Round each value in the chart to the nearest tenth.

Part C
Mark said that if all 4 rhinos stood end to end they would be more than 15 meters in length. Is Mark correct? Explain your answer.

Part D
How is the value of the 8 in the number 3.528 different from the value of the 8 in the number 3.68? Use what you know about place value to explain your answer.

18. Five people entered a rowing competition. The table shows the recorded finishing times for three of the people.

Rowing Times

Person	Time (seconds)
A	20.528
B	20.53
C	20.319
D	
E	

Part A
Compare the time of person A to the time of person B using $>$, $<$, or $=$.

Part B
The rowing time for person D is equal to the time of person C. The rowing time of person E was less than 20.3 seconds, but greater than 20.2 seconds. What are possible times for persons D and E? Label your answers.

Part C
List the 5 people in order from the fastest time to the slowest time. Any person that finished the race in less than 20.4 seconds qualifies for the next rowing competition. Which people qualified? Explain your answer.

Part D
Round the times of the 5 people to the nearest tenth. Compare the results to your answers from Part C. Does the order of the people change? Explain your answer.

19. Mr. Blake measures the pencil shown.

Which expression could be used to determine the total length, in inches (in.), of the pencil?

A. $4 + 2\left(\frac{1}{10}\right) + 9\left(\frac{1}{1000}\right)$

B. $4 + 2\left(\frac{1}{10}\right) + 9\left(\frac{1}{100}\right)$

C. $5 + 2\left(\frac{1}{10}\right) + 9\left(\frac{1}{1000}\right)$

D. $5 + 2\left(\frac{1}{10}\right) + 9\left(\frac{1}{100}\right)$

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20. **The solution to 421 × 32 is *closest to* —**

A. 120.

B. 1,200.

C. 12,000.

D. 120,000.

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21. **A weather forecaster checked and emptied a rain gauge six times one day.**

The measurements in inches were 0.243, 0.595, 0.903, 0.756, 0.398, and 0.112. Which is the best estimate of the total rainfall that day?

A. 2.0 in.

B. 2.5 in.

C. 3.0 in.

D. 3.5 in.

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22. **Martha's pet ferret measures 42.27 centimeters long.**

What is that length rounded to the nearest tenth of a centimeter?

A. 42.0 centimeters

B. 42.1 centimeters

C. 42.2 centimeters

D. 42.3 centimeters

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23. What is 38.1 rounded to the nearest whole number?

A. 31
B. 38
C. 39
D. 40

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24. The attendance for weekend performances of a concert was 1,994 for Friday night, 2,041 for Saturday night, and 1,991 for Sunday night. Which is the BEST estimate of the concerts' total attendance?

A. 2,000
B. 4,000
C. 6,000
D. 8,000

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25. The different weights of sand placed in a truck during 4 different trips are shown in the table.

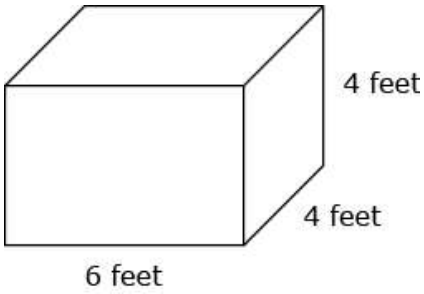
Amount of Sand Placed in Truck

Trip	Weight (pounds)
1	350.16
2	349.2
3	350.34
4	349.65

Tammy rounded each value to the nearest whole number of pounds.

Part A
Tammy said the combined weight was 1,400 pounds after she rounded each value because each weight rounded to 350. Explain whether or not Tammy's statement is true.

Part B
The sand from all 4 trips was dumped into a container in the shape of a rectangular prism with the measurements shown. The sand filled about half of the container.



What is the total volume of the container? Show your work or explain your answer.

Part C
About how many pounds of sand would it take to fill the entire container? Show your work or explain your answer.

Part D
What is a reasonable estimate of the weight of 1 cubic foot of sand? Show your work or explain your answer.

26. The table shows the all-around gymnastics scores at a 2012 world competition.

All-around Gymnastics Scores

Country	Score
China	58.399
Italy	57.999
Romania	58.833
Russia	61.973
United States	62.232

Scores on each event in the competition are determined as follows:

- 6 judges each give a score
- the highest and lowest scores are thrown out
- the remaining 4 scores are added together
- this sum is divided by 4

Part A
Explain whether China's all-around score or Romania's all-around score is greater using the symbols $>$, $=$, or $<$ to compare each place value.

Part B
Judges' scores for one gymnast were 15.05, 14.75, 14.7, 14.9, 15.2, and 14.9. Use the rules given to determine the gymnast's final score. Show or explain your work.

Part C
A gymnast received a final score of 15.733 for an event. This score had been rounded to the nearest thousandth. Give a number that could be rounded to 15.733. Explain why your answer is correct.

27. The chart shows the weights of different foods.

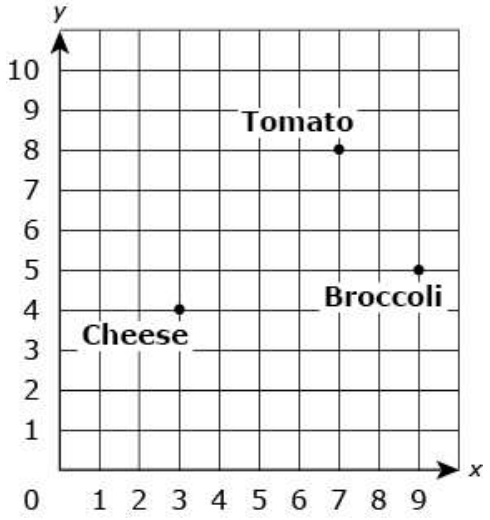
Food Weights

Food	Weight (ounces)
broccoli	3.481
cheese	3.5
tomato	5.218

Part A
Which food from the chart weighs the most? Which one weighs the least? Explain your answer.

Part B
Round each weight to the nearest tenth of an ounce. Explain your answer.

Part C
The coordinate grid shows where these foods are found in the grocery store.



What are the coordinates of each food? The oranges are located at $(3, 8)$ on the grid. In units, how far are the oranges from the cheese? Explain your answer.

Part D
An orange weighs less than 2.5 ounces, but when rounded to the nearest tenth, the weight is 2.5 ounces. What could be the weight of the orange? Explain your answer.

28. The mass of one atom of aluminum is 26.9816 amu (atomic mass unit). Aisha wants to round this mass to the nearest hundredth. What reasoning should Aisha use?

A. round to 26.98 because $1 < 5$

B. round to 26.99 because $8 \geq 5$

C. round to 26.981 because $1 < 5$

D. round to 26.982 because $5 \geq 5$

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29. There are 36 crayons in a box. If your school orders 400 boxes of crayons, how many crayons will the school get?

A. 1,400
B. 2,400
C. 14,400
D. 24,000

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30. A baseball stadium has 18 rows with 142 seats in each row.

Part A
Find the total number of seats in the stadium. Show your work.

Part B
Only $\frac{2}{3}$ of the 18 rows had people in them. Each of those rows was full. How many rows were full? Show your work.

Part C
Write an expression to represent how many seats in the stadium had people in them. Evaluate your expression and explain your answer.

Part D
To find the total number of people sitting in the full rows, Mandy multiplied 142 by 10 and 142 by 2 and then added the products. Does Mandy's method make sense? Use what you know about multiplication to explain why or why not

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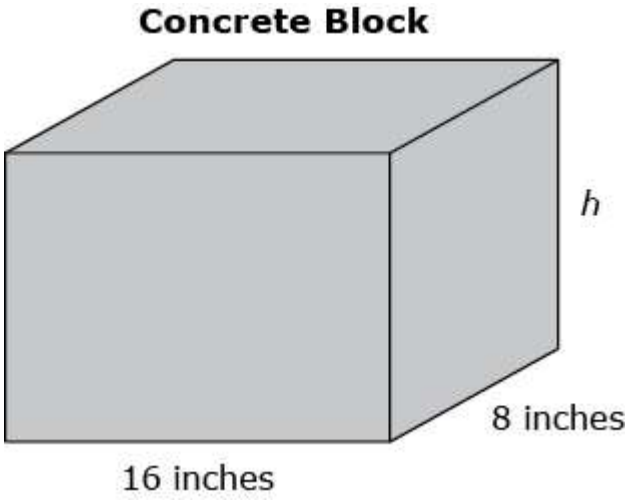
31. A concrete block with a volume of 1,536 cubic inches has a length of 16 inches and width of 8 inches, as shown.



Part A
What is the height *h* , in inches, of the concrete block? Show your work.

Part B
A worker used 36 of these blocks to make a wall along the edge of a garden. He made a single line with the 8-inch-wide faces touching. What is the length, in inches, of the wall? Show your work.

Part C
Another worker used 22 of the blocks on the bottom of a goldfish pond. What is the total volume, in cubic inches, of the blocks used in the pond? Show your work.

32. Tortoises dig tunnels to live in. The measurements of the rectangular floors of 4 tortoise tunnels are shown in the chart.

Tunnel Measurements

Tunnel	Length (feet)	Width (feet)
A	29	8
B	30	12
C	34	9
D	35	11

Part A
What is the area of the floor of Tunnel C? Show your work and include the appropriate unit of measure.

Part B
Which tunnel floor is larger, Tunnel B or Tunnel D? Explain your answer.

Part C

A tortoise is sleeping in Tunnel B, $\frac{3}{5}$ of the tunnel's length from the entrance. How many feet from the entrance is the tortoise? Show your work.

Part D

The length of another tortoise tunnel is $34\frac{3}{4}$ feet. What is the difference between the length of this tunnel and the longest tunnel in the chart? Show your work.

33. Workers placed 4 additional rows of seating in each of the 8 theatres at a movie complex. Each additional row contained 28 seats. What is the total number of seats that were added to the movie complex?

A. 886

B. 896

C. 906

D. 996

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34. A company sells packages of cotton balls. Each package contains 275 cotton balls. The company sent a box of 24 packages of cotton balls to a grocery store. What is the total number of cotton balls that the company sent to the grocery store?

A. 5,280

B. 5,500

C. 6,580

D. 6,600

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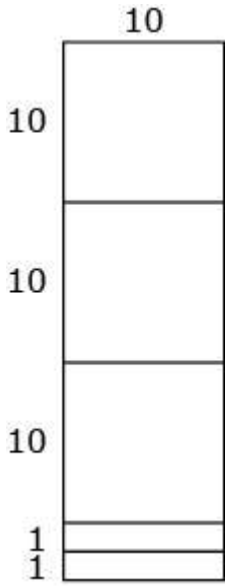
35. Claire needs to divide 768 by 32.

Part A
Claire uses an area model to find the answer. The beginning of her solution method is shown.



Complete her solution. Explain how you use the area model.

Part B
Check your answer using multiplication. Explain why you can use multiplication to check your answer for a division problem.

Part C
Multiply the quotient from Part A by 10^3. Then multiply 32 by 10^4. If the two resulting numbers are multiplied, explain how their product compares to 768 without computing the actual product.

36. Leonard had 5,120 marbles in his collection. He placed all of the marbles into boxes of 20 each. How many boxes of marbles did Leonard have?

A. 256

B. 265

C. 354

D. 492

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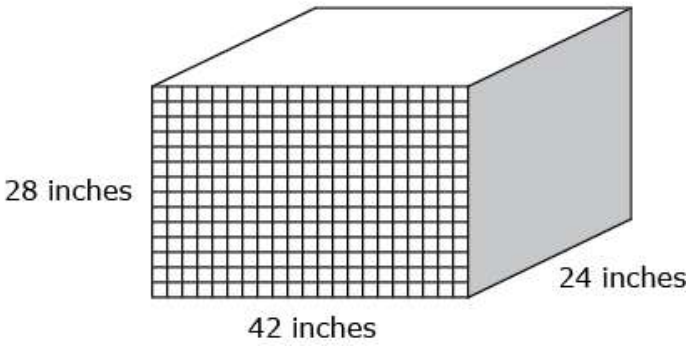
37. Coach Blake coached the girls' basketball team for 3 years. The number of points scored by several basketball players on Coach Blake's team is shown in the chart.

Player	Games Played	Total Points
Johnson	24	456
Andrews	26	546
Mendoza	32	576

Part A
Coach Blake said that Mendoza had scored more points per game than either of the other 2 players. Is this true or false? Explain your answer.

Part B
Coach Blake stored the team's basketballs in crates with dimensions as shown.

Coach Blake's Basketball Crate



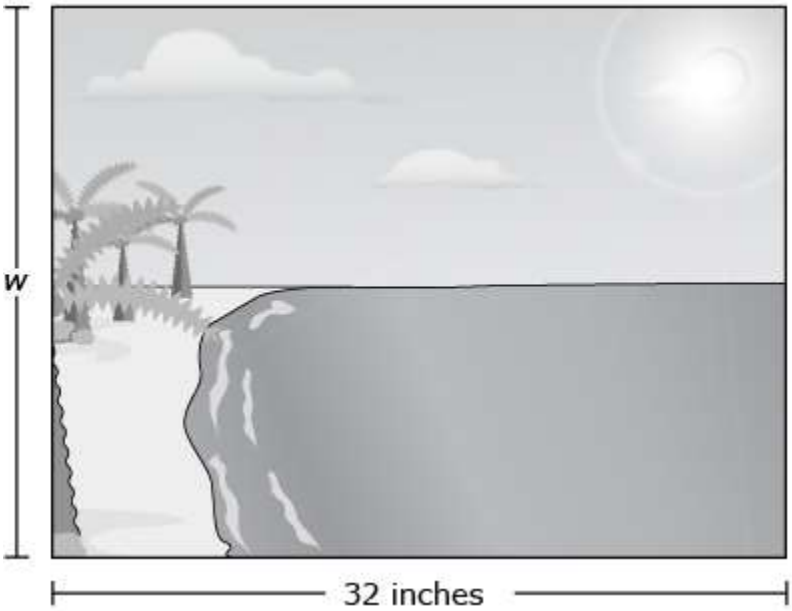
If Coach Blake had 2 crates that were the same size, what is the total volume of both crates? Show your work or explain your answer.

Coach Blake found a crate that is twice as tall as the crate shown above. Which option will provide the greatest amount of space to store the basketballs, the original two crates or the new crate? Explain your answer.

Part C

The team played 32 games during the season and won $\frac{3}{4}$ of the games. Based on this information, how do the number of wins compare to the number of losses? Explain your answer.

38. A customer brought a 768-square-inch poster into a crafts store to get it framed. The length of the poster is 32 inches.



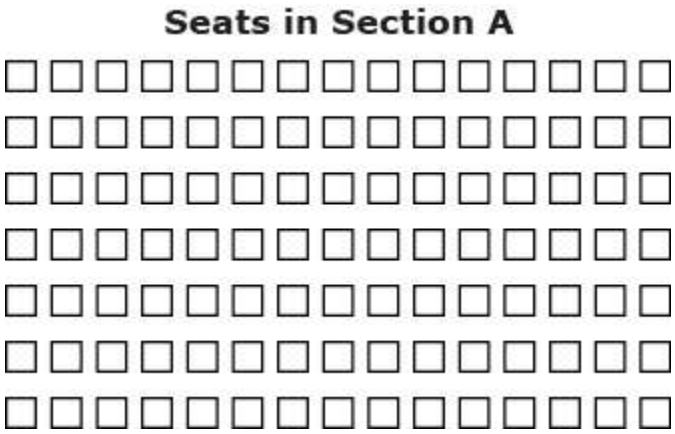
Part A
What is the width, w , of the poster? Show your work.

Part B
A black frame is available with a width that is 4 inches greater than the width of the poster. The framed poster will cover exactly 1,008 square inches of wall space. What is the length of the black frame? Show your work.

Part C
A brown frame is available with a length and width both 3 inches greater than the width and length of the poster. How many square inches of wall space will the brown frame cover? Show your work.

Part D
A white frame is the customer's favorite. The white frame covers 868 square inches of wall space. The length is 1 inch less than the length of the poster. Determine whether the frame is wide enough for the poster. Show your work and explain your answer.

39. A construction worker made a diagram to show the seats in Section A of an auditorium that he is building. Section A has seven rows as shown in the diagram.

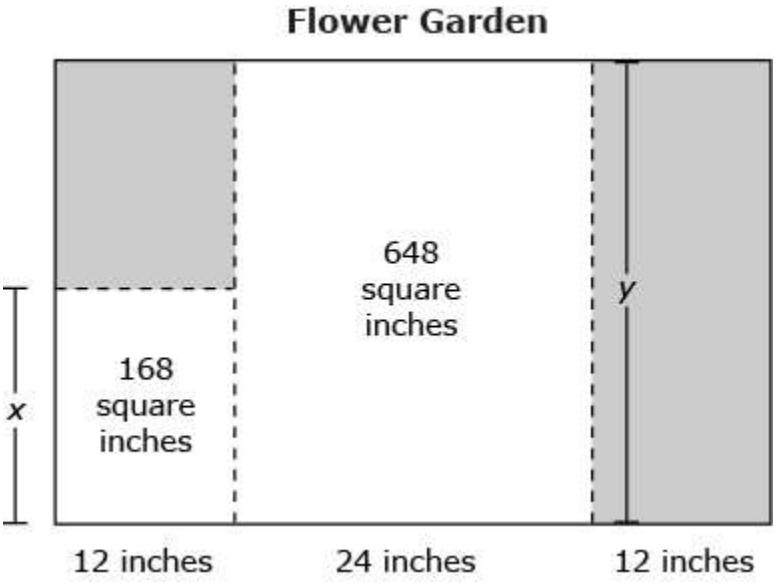


Part A
Write an equation that shows the relationship between the number of rows, the number of seats per row, and the total number of seats in Section A.

Part B
According to the plan, Section B in the auditorium will have a total of 240 seats, with an equal number of seats in each row. Section B has 9 more seats per row than Section A. How many rows are in Section B? Show your work.

Part C
In the original plan, Section C was going to have 20 rows with 34 seats per row. The plans were changed and $\frac{1}{4}$ of the rows were removed. Based on the new plans, how many total seats are in Section C? Show your work.

40. The figure shows 4 rectangular areas within a rectangular flower garden.



Part A
The gardener planted yellow flowers in the rectangular area labeled “168 square inches.” What is the missing dimension, x , of the rectangle where the yellow flowers are planted? Show your work.

Part B
The gardener planted red flowers in the rectangular area labeled “648 square inches.” What is the missing dimension, y , of the rectangle where the red flowers are planted? Show your work.

Part C
The gardener planted purple flowers in both of the shaded rectangular areas. How many square inches of the garden have purple flowers? Show your work and explain your answer.

41. **Which of the following will be a true statement if an equal sign (=) is placed in the box?**

A. $5 + 2 \square 5 + 5$

B. $5 + 10 \square 10 - 5$

C. $5 + 5 \square 10 \times 2$

D. $5 + 5 \square 2 \times 5$

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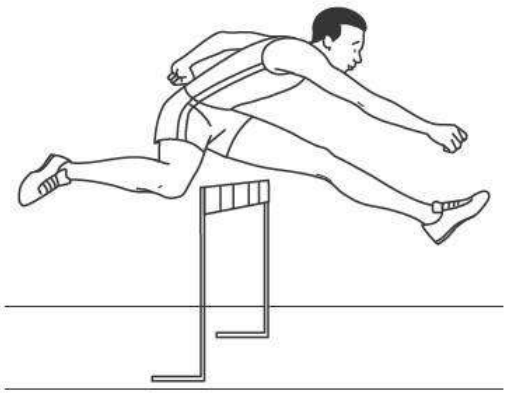
42. **The men's 110-meter hurdles is an event in the Olympic games.**



The distance from the starting line to the first hurdle is 13.72 meters. The distance from the first hurdle to the second hurdle is 9.14 meters. What is the total distance from the starting line to the second hurdle?

A. 19.86 meters

B. 22.86 meters

C. 23.86 meters

D. 24.86 meters

43.

Which operation completes the equation?

6.1 _____ 3.9 = 10.0

A. +
B. -
C. x
D. ÷

44.

Alice bought two pairs of socks for $2.54 each, including tax. She paid with a ten dollar bill. How much change should she receive?

A. $4.92
B. $5.08
C. $7.92
D. $7.46

45.

Fran lives 1.5 miles from school. Bryce rides her bike 0.5 miles to school every day. Darren lives 0.7 miles farther than Bryce. How many miles do the three children travel to school everyday?

A. 1.12
B. 2.2
C. 2.5
D. 3.2

46.

Oscar had $15.39. He wants to divide this amount evenly between himself and two of his friends. How much should each person get?

A. $3.15
B. $5.03
C. $5.13
D. $7.69

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47. Eriko is trying to estimate the number of candy bars she would have to sell in order to collect $10.00. If each candy bar cost $0.48, about how many would she have to sell?

A. 10
B. 20
C. 30
D. 40

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48. Elena's uncle took her and three cousins to the ice cream store. The cousins each ordered milkshakes for $1.40 each and Elena had a double dip of peach ice cream that cost $1.25. What was the total cost of the order?

A. $2.65
B. $4.45
C. $5.45
D. $6.45

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49. Each night Ann and her family empty their pockets, purses, and wallets and place all of the pennies, nickels, dimes, and quarters in a large container. At the end of the month, Ann helps her father count the coins. If Ann counted 345 pennies, 142 dimes, and 60 quarters, how much money did she count?

A. $32.65
B. $47.65
C. $385.45
D. $547.00

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50. It takes Tomas about 2 hours to deliver the 57 newspapers on his route. He earns $0.10 for each newspaper he delivers. About how much does Tomas make per hour?

A. $8.00
B. $6.00
C. $3.00
D. $2.00

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51. One box of candy costs $0.59. How much do 12 boxes cost?
Which operation is needed to solve the above problem?

A. ÷
B. +
C. –
D. ×

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52. Ernesto drove his car 257 miles on 8.3 gallons of gasoline.
What operation is needed to find the number of miles per gallon?

A. +
B. –
C. ×
D. ÷

---

53. A book is 1-inch thick, not including the cover. If the book contains 364 sheets of paper, which measure is closest to the thickness of one sheet of paper?

A. 0.003 in.

B. 0.030 in.

C. 0.300 in.

D. 0.364 in.

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54. Miguel wants to buy 3 bags of potato chips. Each bag of potato chips costs $2.69. If he uses a coupon for $1.00 off the price of one bag, how much will Miguel owe for the 3 bags of potato chips?

A. $1.69

B. $3.72

C. $7.07

D. $8.07

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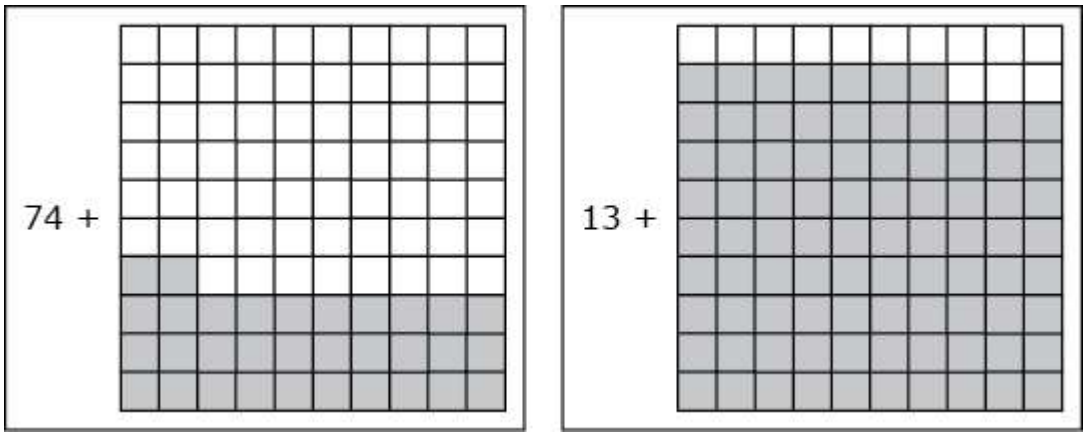
55. The two figures below represent two decimal numbers.



Part A
What are the two decimal numbers that are represented by the figures? Explain your answers.

Part B
Use > , = , or < to compare your decimals from Part A. Explain your reasoning.

Part C
Round each of the two decimals from your expression in Part B to the nearest tenth. What is the sum? Explain how you determined your answer.

---

56. The distances that 3 cars traveled to get to school are shown in the table.

Distances Traveled to School

Car	Distance (miles)
blue	3
red	1.91
green	2.4

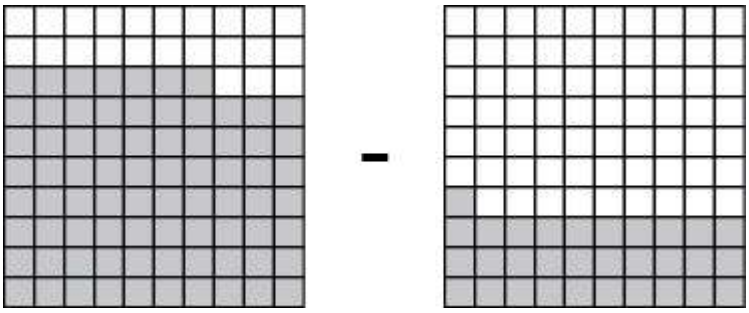
Part A
How much farther did the blue car travel than the red car? Show your work.

Part B
The green car made 5 trips to school and back during the week. How far did the car travel during all of those trips?

Megan noticed a pattern when she found the products. She said any time you multiply a number by 10, you just add a zero. Is Megan's statement correct? Use what you know about multiplying by 10 to explain your answer.

Part C
A white car traveled a total of 1,440 miles back and forth to school for 30 school days. Megan said the car traveled more than 20 miles one way to school. Explain why Megan's statement is true or not true.

57. The model shown represents the numbers in a subtraction expression.



What number represents the value of the expression?

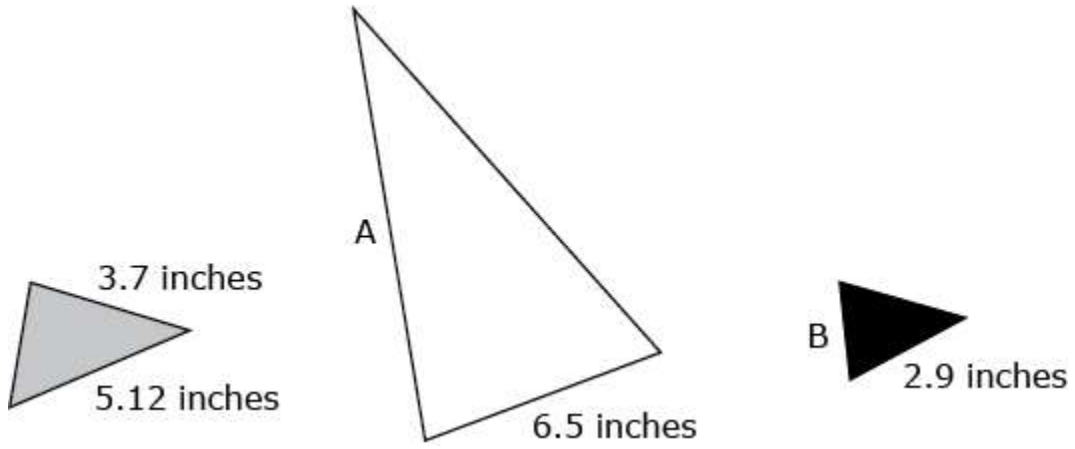
A. 0.046

B. 0.108

C. 0.46

D. 1.08

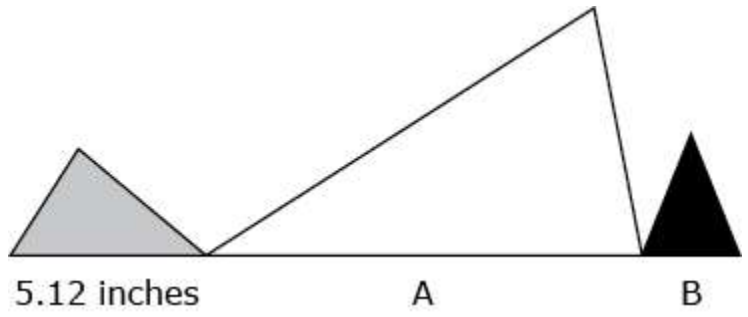
58. The diagram shows the dimensions of the longest and shortest sides of three triangles.



Part A
Side A of the white triangle is 2.5 times the length of the longest side of the gray triangle. What is the length, in inches, of side A? Show your work.

Part B
Side B of the black triangle is half the length of the longest side of the gray triangle. What is the length, in inches, of side B? Show your work.

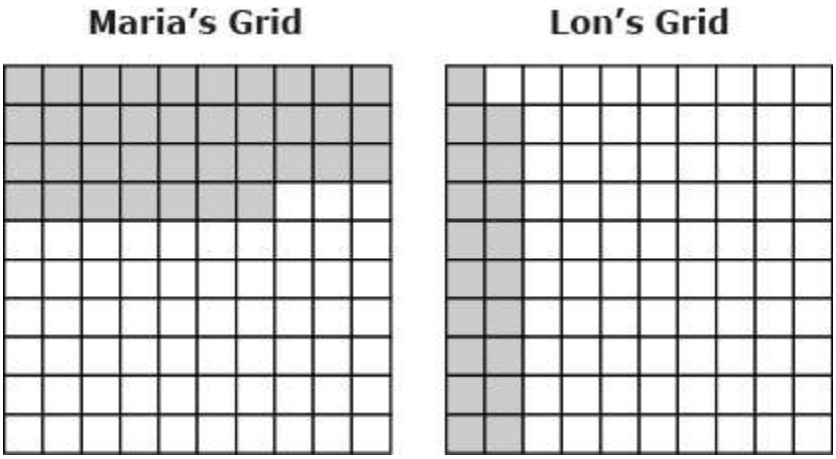
Part C
The triangles will have the bases glued end-to-end on a paper strip, as represented in the diagram shown below.



What is the minimum length, in inches, the rectangular paper strip needs to be for all of the triangles to fit? Show your work.

Part D
The paper strip that will be used is 24 inches in length. The triangles will be centered on the paper strip with an equal space left on both ends. What will be the distance, in inches, from the one end of the paper strip to the nearest triangle? Show your work or explain your answer.

59. Maria and Lon each started shading a hundredths grid before their lunch break. The picture shows how much they have shaded.



Part A
Compare the two decimals, shown by the shaded parts in the grids, using > , = , or < .

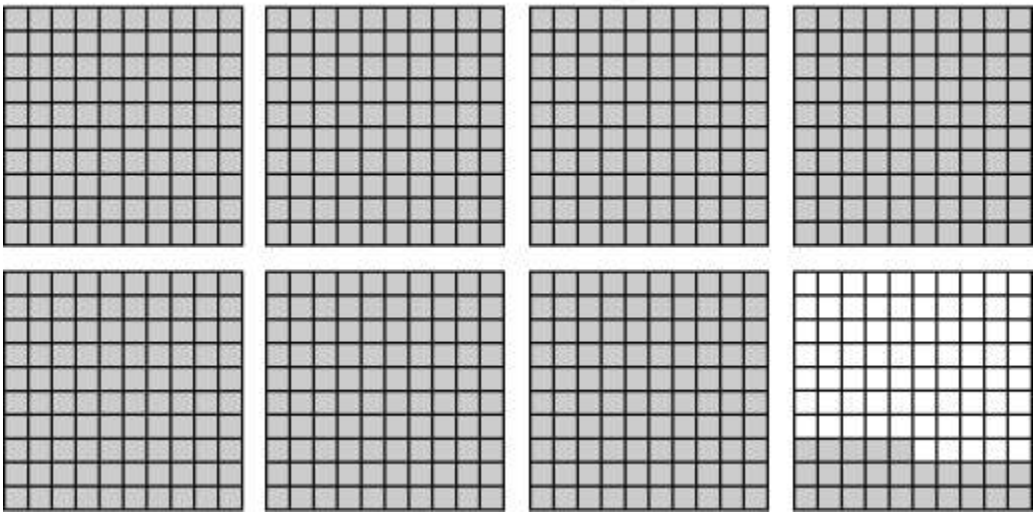
Part B
Maria continues to shade her grid. When she is finished shading the grid, the grid has twice as many boxes shaded. Write the total amount she has shaded as a decimal. Show your work or explain your answer.

Part C
When Lon finishes shading his grid, the shaded part of his grid will be equal to the unshaded part of Maria's grid. How many more squares will Lon have to shade on his grid to make this true? Show your work or explain your answer.

Part D
Two students at Maria's and Lon's work table have shaded their hundredths grids to represent 0.61 and 0.48. What is the total number of shaded squares on all four students' shaded grids? Show your work or explain your answer.

60. The model shown represents the amount of money Ethan earned on his first leaf-raking job. Each hundredths block represents $1.00.

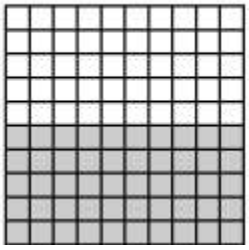
First Leaf-Raking Job



Part A
What is the total amount of money Ethan earned on his first leaf-raking job? Explain how you determined the amount.

Part B
The model shown below represents the additional amount of money Ethan earned on his second leaf-raking job compared to his first leaf-raking job.

Additional Amount Earned



What is the additional amount Ethan earned on his second leaf-raking job? Explain your answer.

Part C
On Ethan's third leaf-raking job, he earned twice the amount of his first leaf-raking job. What is the total amount Ethan earned on his third leaf-raking job? Show your work.

Part D
On Ethan's fourth leaf-raking job, he earns $1.60 less than his first leaf-raking job. Use words to describe the diagram that can be used to represent the amount Ethan earned on his fourth leaf-raking job.

61. **Kiko bought snacks to take to the park. She chose pretzels for $2.99, 2 bottles of juice for $1.09 each, and 1 package of turkey slices for $4.95. What is the BEST estimate of the total cost of these items before tax?**

A. $5.00

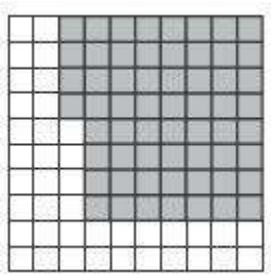
B. $10.00

C. $15.00

D. $20.00

---

62. **Which represents the part of the 10-by-10 grid that is shaded?**



A. $\frac{1}{2}$

B. $\frac{3}{5}$

C. $\frac{7}{10}$

D. $\frac{3}{4}$

---

63. **Jamal walked $\frac{3}{4}$ mile yesterday morning and $\frac{1}{8}$ mile yesterday afternoon. What was the total distance walked by Jamal?**

A. 1 mile

B. $\frac{7}{8}$ mile

C. $\frac{1}{2}$ mile

D. $\frac{1}{3}$ mile

64.

$$\begin{array}{r} 2\frac{2}{3} \\ -\ \frac{1}{4} \\ \hline \end{array}$$

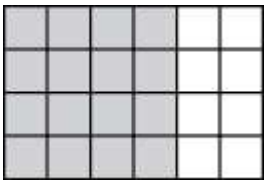
A. $2\frac{5}{12}$

B. $2\frac{3}{7}$

C. $1\frac{1}{12}$

D. $1\frac{5}{12}$

65. There are 24 seats on a tram. A total of 16 seats were used on the trip up the mountain, as shown in the shaded section below.



During the trip down the mountain, $\frac{5}{12}$ of the seats were used.

Part A
What fraction of the seats was used on the trip up the mountain? Find the difference in the fraction of seats used on the trip up the mountain and the trip down the mountain. Show your work or explain your answer.

Part B
A round trip includes the ride up and down the mountain. Each ride up the mountain cost $6.25; a return ride also costs $6.25. Based on the fraction of seats used on the trip up and down the mountain in Part A, what was the total amount of money made by the tram during this round trip? Show your work.

Part C
The cost to operate the tram for the round trip up and down the mountain is $137.50. Write an expression to show the amount of money the tram company made on the round trip. What is the value of the expression?

Part D
The tram company made the same amount of money found in Part C for the first 4 round trips of the day. Create a coordinate plane showing the amount of money the tram company made for the first four round trips of the day. Be sure that the *x*- value shows the number of round trips and the *y*- value shows the total amount of money made.

How much money was earned for the first 4 round trips? Show your work or explain your answer.

66. Ella is running a race that is 5 kilometers (km) long.

Part A
How long is this race in meters? Show or explain your work.

Part B

The first water station is $1\frac{7}{8}$ km into the race. The second water station is $1\frac{1}{3}$ km after the first water station. How many kilometers from the end of the race is the second water station? Show your work.

Part C

Ella checks her watch every $\frac{1}{2}$ km to check her speed. How many times during the race will she check her watch? Show or explain your work.

---

67. Mya, Jean, and Cody shared a pie. Mya ate $\frac{3}{8}$ of the pie, Jean ate $\frac{1}{8}$ of the pie, and Cody ate $\frac{1}{2}$ of the pie.

Part A
What fraction represents the total amount of the pie that Mya and Cody ate? Show your work and explain how you determined your answer.

Part B
Mya said she ate a larger fraction of the pie than Cody did. Explain whether Mya is correct.

Part C
Jean said that the total amount of pie she and Mya ate is equal to the amount that Cody ate. Explain whether Jean is correct and show why or why not.

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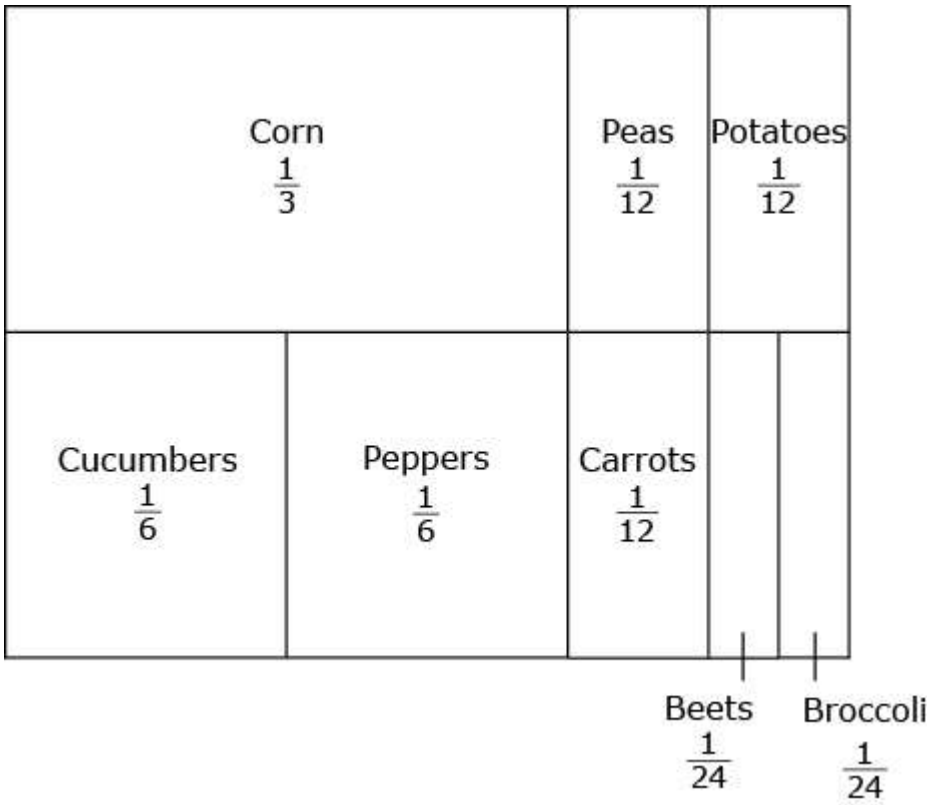
68. The picture shows a farmer's field and how it is divided.



Which 2 parts cover a total of $\frac{5}{12}$ of the field?

A. Peppers and Cucumbers

B. Cucumbers and Corn

C. Peas and Potatoes

D. Corn and Peas

69. In March, Emily read $1\frac{3}{4}$ books and Eric read $3\frac{1}{2}$ books.

Part A

Emily wrote the equation $1\frac{3}{4} + 3\frac{1}{2} = 5\frac{1}{4}$ to represent the total number of books she and Eric read. Create a model to explain why Emily's equation is correct or incorrect.

Part B

Eric says the total of books read is $4\frac{5}{4}$. Explain whether Eric's total is correct or incorrect.

Part C

In April, Emily read a total of 2 books. Emily read $\frac{1}{4}$ of the number of books Eric read. How many books did Eric read in April? Show your work or explain your answer.

---

70. Allison painted $\frac{2}{7}$ of her room before lunch and $\frac{2}{3}$ of her room after lunch. How much of the room did she paint before and after lunch?

A. $\frac{4}{21}$

B. $\frac{2}{5}$

C. $\frac{1}{2}$

D. $\frac{20}{21}$

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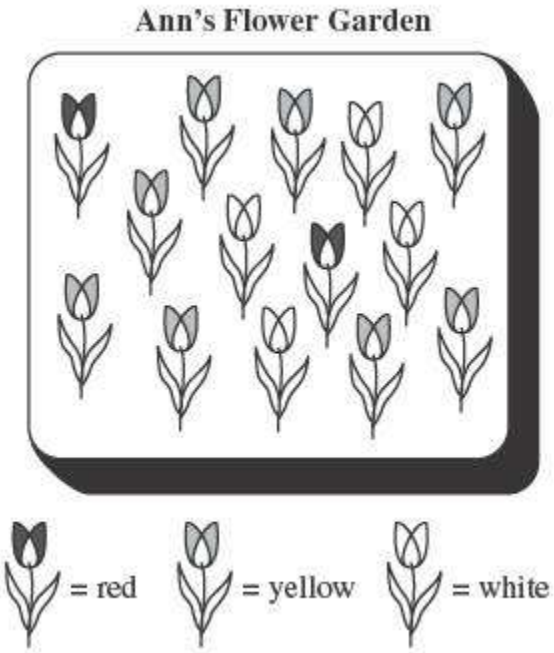
71. In Ann's flower garden, $\frac{1}{7}$ of the tulips are red, $\frac{4}{7}$ are yellow, and the rest are white.



What fraction of the tulips is white?

A. $\frac{1}{7}$

B. $\frac{2}{7}$

C. $\frac{3}{7}$

D. $\frac{4}{7}$

72. Malika bought a basket of apples at a local farm. She gave $\frac{1}{3}$ of the apples to Laura and $\frac{1}{5}$ of the apples to Perry.

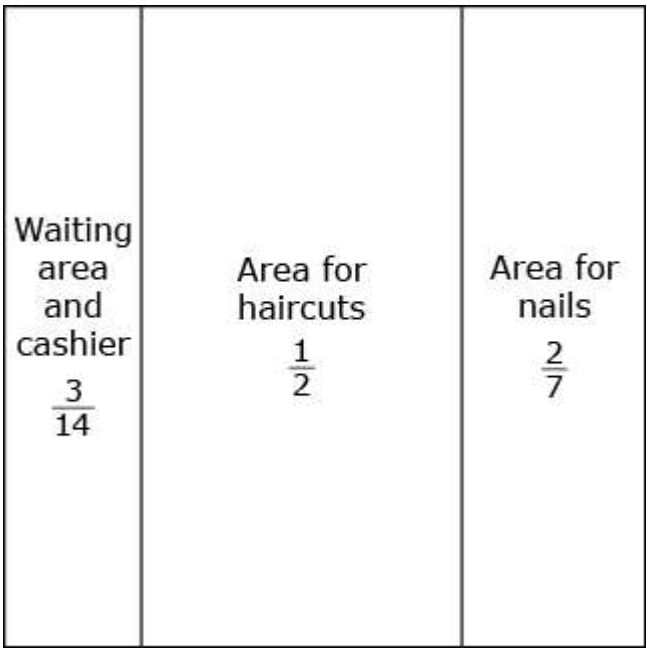
Part A
What fraction of the apples did Malika keep? Show your work.

Part B
Malika originally had 30 apples in the basket. Write and evaluate an expression to determine the number of apples she kept.

Part C
Malika used her apples to make muffins. She sliced each apple into 16 pieces. How many pieces of apples did she make? Show your work.

Part D
Malika needs 6 apple pieces to make each muffin. What is the total number of muffins she could make? Show how you got your answer.

73. The workers at a new beauty salon have set up the salon as shown.

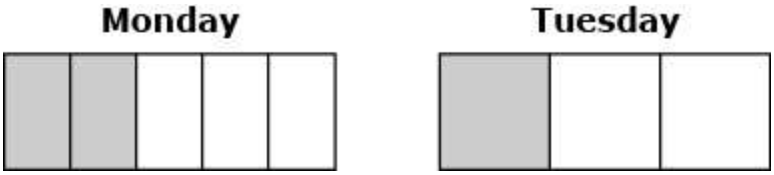


Part A
What is the difference between the fraction of the salon used for haircuts and the fraction used for nails? Show your work.

Part B
The area of the haircut section is 280 square feet. What is the area of each of the other 2 sections? What is the total area of the salon? Show your work or explain your answers.

Part C
The cost to rent the salon is $1,960 per month. A second salon is available to rent for $1,860 a month. The second salon is 620 square feet. Which salon costs less per square foot? Show your work or explain your answer.

74. Brad is working on his science project. The models show each part of the science project Brad completes on Monday and Tuesday.



Part A
Draw a fraction model to represent the total amount of the science project Brad completed on Monday and Tuesday. Explain your model.

Part B
Brad plans to finish the project on Wednesday. What fraction of the project does he need to finish on Wednesday? Show your work or explain your answer.

---

75. Michael can run $\frac{4}{9}$ of a mile in 5 minutes. He claims he can run 1 mile in 10 minutes. Is he correct?

A. Yes, because $\frac{4}{9}$ is equal to $\frac{1}{2}$ so he can run 1 mile in 10 minutes.

B. Yes, because $\frac{4}{9}$ is greater than $\frac{1}{2}$ so he can run 1 mile in 10 minutes.

C. No, because $\frac{4}{9}$ is less than $\frac{1}{2}$ so it will take him longer than 10 minutes to run 1 mile.

D. No, because $\frac{4}{9} \times 5 = \frac{20}{9}$ and this is more than 1 mile.

---

76. Cara planned her monthly activities for February as shown.

February

	1	2	3	4	5	6
7	8 Babysitting	9 Babysitting	10 Babysitting	11 Babysitting	12 Babysitting	13 Movie
14	15 Babysitting	16 Babysitting	17	18	19 Basketball game	20 Basketball game
21	22 Movie	23	24	25	26 Basketball game	27 Basketball game
28						

Cara decided to go to a movie during $\frac{1}{14}$ of the days in February.

Part A
What fraction of the days did Cara either attend a movie or a basketball game? Explain your answer.

Part B

Cara said she babysat on more than $\frac{1}{2}$ of the days in February. Does Cara's statement make sense? Explain your answer.

Part C
Each day has 24 hours. To find the total number of hours in February, Cara first multiplied 24 by 30. What steps must Cara take in order to finish finding the number of hours in February? Explain your answer.

Part D
What is the difference between the fraction of days she babysat and the fraction that she went to a basketball game? Show your work.

77. Ms. Smith bought a bag of 32 marbles to give to her 6 grandchildren. The table shows the fractions of marbles by color.

Marble Colors

Color	Fraction
black	$\frac{3}{32}$
blue	$\frac{3}{8}$
green	$\frac{5}{32}$
red	$\frac{1}{8}$
white	$\frac{3}{16}$
yellow	$\frac{1}{16}$

Part A
How many marbles of each color did Ms. Smith buy? Show or explain your work. Check that your answer is correct by finding the total number of marbles.

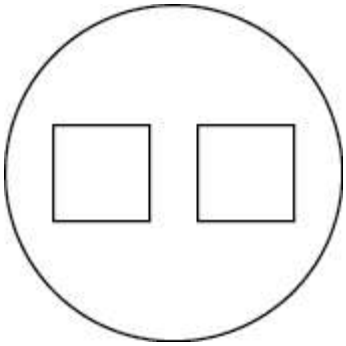
Part B
How many more blue marbles than green marbles were in the bag? Show or explain your work using both the fractions and the number of each color of marble.

Part C
What is the fewest number of additional marbles Ms. Smith can buy so that each of her grandchildren gets the same number of marbles and the same number of each color with no leftover marbles? Explain how you got your answer.

78. An art teacher bought a package of paper plates for the students in her 3 art classes to use for a bulletin board contest. The package had a total of 50 paper plates in it. She plans to split the package as evenly as possible between the 3 classes.

Part A
How many plates should each class receive? Show your work and write your answer as a fraction.

Part B
The students in one class cut two congruent squares out of each paper plate.



Each square had a side length of $1\frac{1}{2}$ inches. Using fractions, what is the area of each square? Show your work and write your answer as a fraction.

Part C
A student made a larger square using some of the cut-out squares. The area of the larger square was greater than 20 square inches, but less than 30 square inches. What could be the side length of the larger square? Show your work or explain your answer.

79. A science teacher has 30 pounds of salt and 20 liters of water to use for a class experiment. Each of 8 groups of students will receive an equal share of both the salt and the water.

Part A
What fraction shows the number of pounds of salt each group should receive? Explain your answer.

Part B
Three of the groups have received their equal shares of the water. What fraction shows the number of liters of water that still needs to be distributed? Show your work and explain your answer.

---

80. Eight students are sharing a package of 50 sheets of construction paper in an art class. Each student will receive an equal number of sheets of construction paper.

Part A
Write a mixed number that represents the number of sheets of construction paper each student should receive. Explain what each part of the mixed number means in this situation.

Part B

The package of 50 sheets of construction paper the students are sharing is $\frac{1}{8}$ of the total sheets of construction paper purchased for the 5th graders. Use a fraction model to show the total number of sheets of construction paper purchased for the 5th graders. Explain your model.

---

81. Eight teachers are sharing a package of 109 number cubes. About how many number cubes will each teacher receive? Between which two whole numbers does your answer lie?

A. Between 10 and 11

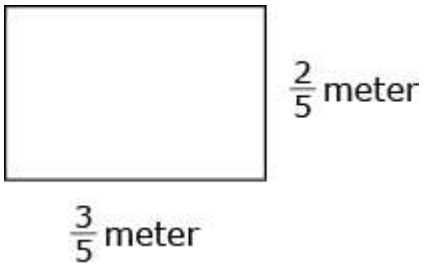
B. Between 11 and 12

C. Between 12 and 13

D. Between 13 and 14

---

82. The side lengths of a rectangle are shown.



What is the total number of squares with $\frac{1}{5}$ meter sides that would cover this rectangle?

A. 5

B. 6

C. 10

D. 25

---

83. Marty has a collection of 109 toy cars.

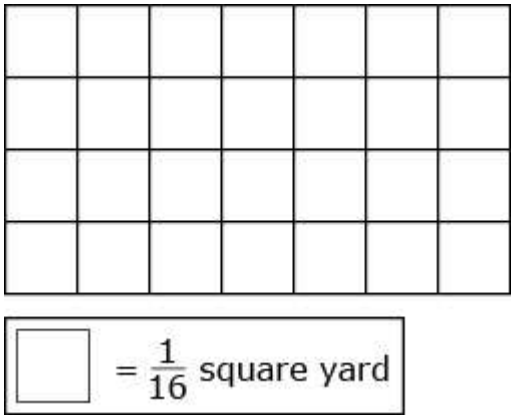
Part A
Marty keeps his cars in a storage container. The container is in the shape of a right rectangular prism. The container's base is a square with sides that are 16 inches long, and the container's height is 5 inches. What is the volume of the storage container? Show or explain your work.

Part B
Marty paid $3.99 for each car in his collection. How much did he pay for all 109 cars? Show or explain your work.

Part C

Marty decides to give $\frac{2}{7}$ of his toy car collection to each of his 3 cousins. What fraction of the collection will Marty have left? Show or explain your work.

84. Garrett has a rectangular door mat. The door mat is made from congruent square pieces. The figure shown below represents Garrett's door mat.



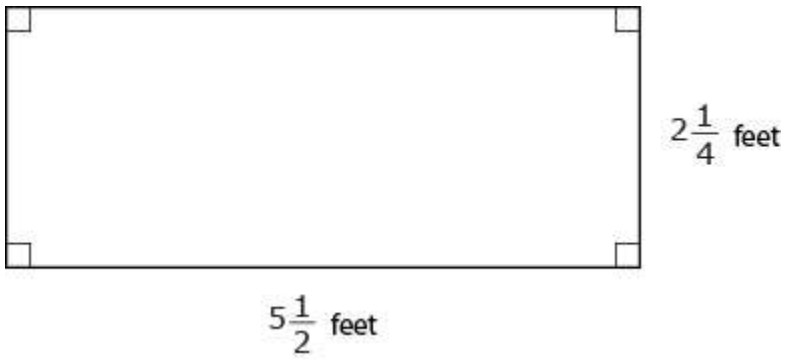
Part A
What is the edge length, in yards, of each of the square pieces used to make the door mat? Explain how you got your answer.

Part B
What is the total number of pieces used to make the door mat? Explain how you can use this answer to find the area of the door mat.

Part C
The door mat is exactly 7 pieces long and exactly 4 pieces wide. Using this information, write an expression that can be used to find the area, in square yards, of the door mat.

Part D
Evaluate your expression from Part C. What is the area, in square yards, of the door mat? Show your work.

85. A worker is removing carpet from two closets in a home. The figure shown represents the rectangular floor of the first closet.



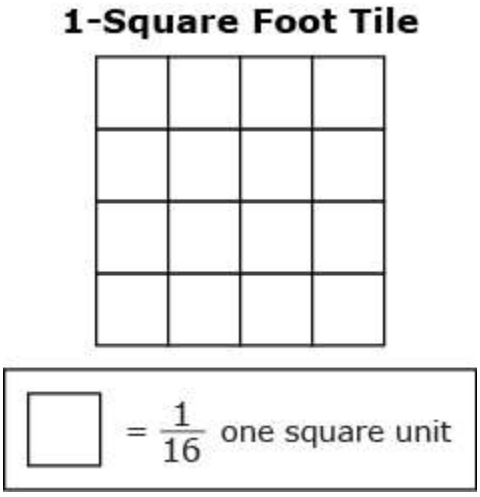
Part A
What is the area, in square feet, of the first closet floor? Show your work.

Part B

The area of the second closet floor is $2\frac{1}{2}$ times of the area of the first closet floor. What is the area, in square feet, of the second closet floor? Show your work.

Part C
In order to determine what type of material to use to cover the closet floors, the worker needs to determine the total area, in square feet, of the two closet floors. What is the total area, in square feet, of the two closet floors? Show your work.

86. Jessica has a patio that is $3\frac{1}{2}$ feet wide and $7\frac{1}{2}$ feet long. She is placing square tiles on the floor of her patio. The side length of each square tile is $\frac{1}{4}$ foot.



Part A
What is the area of the patio that needs to be covered in tiles? Show your work.

Part B
How many $\frac{1}{4}$ foot square tiles will fit on each side of the patio to be tiled? Use a model or an equation to show your work.

Part C
The $\frac{1}{4}$ foot square tiles that Jessica wants to buy cost $5.60 per square foot. How much does a $\frac{1}{4}$ foot square tile cost? Show your work.

Part D
How many $\frac{1}{4}$ foot square tiles does Jessica need to cover the entire patio? Show your work.

87. Alex spends 14 days on vacation. She spends $\frac{4}{7}$ of the 14 days at the beach and half as many days visiting museums as she spends at the beach.

Part A
Draw one model to represent the part of the vacation Alex spends at the beach and another model to represent the part of the vacation Alex spends visiting museums. Explain your models.

Part B
Alex spends the remaining vacation days at an amusement park. Write an equation that can be used to determine which part of the 14 days Alex spends at the amusement park.

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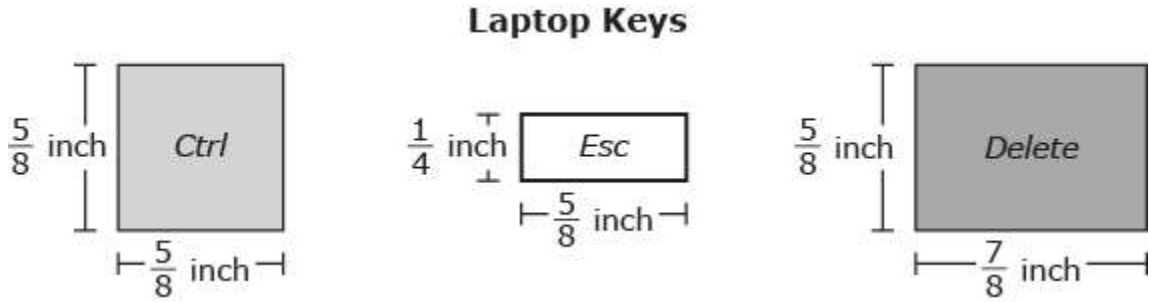
88. A computer store worker removed three rectangular keyboard keys from a customer's laptop. She painted the tops of the keys with different colors to help the customer locate each key on the keyboard. The picture shows the dimensions of the laptop keys that were removed and painted.



Part A
The top of the control (Ctrl) key was painted yellow. What is the area, in square inches, that was painted yellow? Show your work.

Part B
The border of the escape (Esc) key was painted orange. What is the length, in inches, of the border? Show your work.

Part C
The top of the delete key was painted red. How much greater, in square inches, is the area of the red key than the area of the control (Ctrl) key? Show your work.

Part D

The dimensions of the rectangular shift key on the laptop are $\frac{5}{8}$ inch by $2\frac{1}{4}$ inches. The computer store worker said the area of the top of the shift key is less than $2\frac{1}{4}$ square inches. Explain how she knows this is true without doing a computation.

---

89. A total of 159 people watched a free movie at the theater. Ollie said the people were separated into two groups. The smaller theater seated $\frac{1}{3}$ of the group. The remaining people went to the larger theater.

Part A

Ollie multiplied 159 by $\frac{1}{3}$ and got 477 to find the number of people in the smaller theater. Is Ollie correct? Explain your answer without finding the correct product. Use what you know about multiplying a fraction by a whole number in your explanation.

Part B

Ollie said $\frac{2}{3}$ of the group were in the larger theater. How many people were in the larger theater? Show your work.

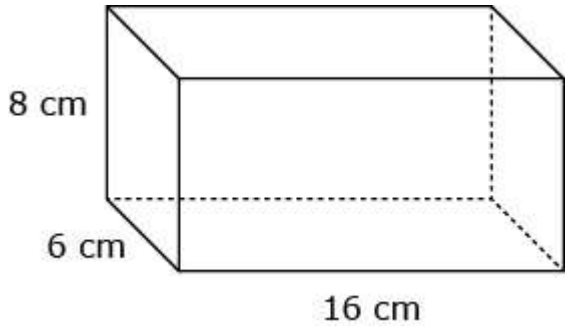
Part C

The people in the larger theater filled rows of 14 seats each. How many rows did the people fill? Use an expression to explain your solution.

Part D

Each seat in the theater is 0.4 meters wide. What is the width of a seat in centimeters? What is the sum of the widths of 14 seats? Show your work or explain your answer.

90. A company makes plastic boxes in the shape of a rectangular prism. The measurements are given in centimeters (cm), as shown.

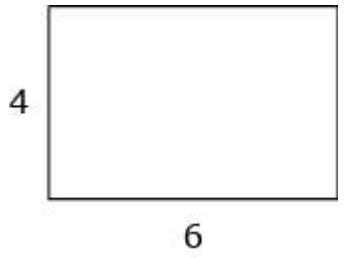


Part A
The company plans to start making the plastic box in a different size. The length, width, and height of the new plastic box are $\frac{3}{2}$ the dimensions of the original plastic box. Which of the boxes will be larger? Explain your answer.

Part B
What are the dimensions of the new plastic box? Be sure to label which dimension is the length, width, and height. Show your work.

Part C
A worker at the company says that 3 of the original plastic boxes will fit inside each of the new plastic boxes. Is the worker correct? Explain your answer.

91. Justin drew a rectangle on grid paper. It had a base of 6 units and height of 4 units.



Justin drew a new rectangle by multiplying the base and height of the rectangle shown by $\frac{2}{3}$. Which statement about the base and height of Justin's new rectangle is true?

A. The base is **greater** than 6 and the height is **greater** than 4, because when a number is multiplied by a fraction **less** than 1, the result is **greater** than the number.

B. The base is **less** than 6 and the height is **less** than 4, because when a number is multiplied by a fraction **greater** than 1, the result is **less** than the number.

C. The base is **greater** than 6 and the height is **greater** than 4, because when a number is multiplied by a fraction **greater** than 1, the result is **greater** than the number.

D. The base is **less** than 6 and the height is **less** than 4, because when a number is multiplied by a fraction **less** than 1, the result is **less** than the number.

92. A cube has an edge length of 30 centimeters.

Part A
What is the volume of the cube? Show your work and label your answer.

Part B

Explain what happens to the cube when each of the edge lengths is multiplied by $\frac{1}{5}$.

Part C
Explain what happens to the cube when each of the edge lengths is multiplied by 8.

Part D
Write a fraction that each edge length can be multiplied by without changing the volume of the cube. Explain your answer.

---

93. Colin gives roses and chocolates to his sister and his mother.

Part A

Colin gives 6 roses to his sister and gives $\frac{5}{3}$ as many roses to his mother. Did Colin give more roses to his sister or his mother?

Write an expression to represent the number of roses Colin gives to his mother.

Without evaluating the expression you wrote, explain how you can you answer the question above just by looking at your expression.

Part B

Colin has a total of 18 ounces of chocolate. He gives his mother $6\frac{2}{3}$ ounces of the chocolate and $5\frac{5}{8}$ ounces of chocolate to his sister. How many ounces of chocolate does Colin have left?

Show your work.

---

94. Amy's science class has a group of 24 students. Miguel's science class has $\frac{2}{3}$ the number of students as Amy's class. Which explanation correctly describes whether Miguel's class will have more or fewer students than Amy's class?

A. Miguel's class will have fewer students because $\frac{2}{3}$ is greater than 1.

B. Miguel's class will have fewer students because $\frac{2}{3}$ is less than 1.

C. Miguel's class will have more students because $\frac{2}{3}$ is greater than 1.

D. Miguel's class will have more students because $\frac{2}{3}$ is less than 1.

---

95. A rectangular rug being created by a weaver is not finished.

Rug

At this time, the rug is only $2\frac{1}{3}$ feet long and $\frac{1}{2}$ foot wide.

Part A
What is the area of the rug so far? Show your work.

Part B
The weaver states that the area of the finished rug will be 14 square feet. Explain what the final dimensions would need to be for the rug to have this area.

Part C
The finished rug was rolled up and placed in a box to be shipped. The rug weighs 35 pounds. If the total cost to ship the rug is $227.50, what is the cost per pound? Show your work.

---

96. White Mountain National Forest covers more than 780,000 acres. One-seventh of the forest is reserved as wilderness. Approximately how many acres are in the wilderness area?

A. 400,000
B. 320,000
C. 260,000
D. 110,000

---

97. The fractions of students in the school band who play different instruments are shown in the table.

School Band

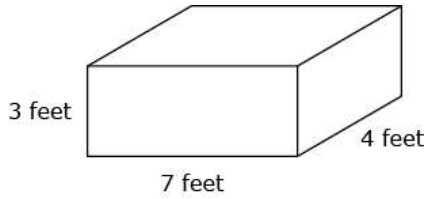
Instrument	Fraction of Band
horns	$\frac{3}{8}$
percussion	$\frac{1}{12}$
strings	$\frac{13}{24}$

Part A
There are 24 students in the band. How many students play each kind of instrument? Show your work.

Part B

The room where the band practices has a rectangular floor that is $5\frac{1}{4}$ yards wide and $7\frac{3}{4}$ yards long. What is the total area of the practice-room floor? Show your work and include the unit of measure.

Part C
The band travels with a case to hold their uniforms, as shown below.



What is the volume of the case? Show your work and include the unit of measure.

---

98. Carolyn is making gift boxes. Each gift box can hold $\frac{3}{4}$ pound of peanuts. Carolyn bought enough peanuts to fill $7\frac{1}{2}$ boxes. How many pounds of peanuts did Carolyn buy?

A. $5\frac{5}{8}$

B. $6\frac{3}{4}$

C. $8\frac{1}{4}$

D. 10

---

99. A coach spent a total of $56.40 on 10 pizzas for the soccer team. There are 12 players on the soccer team. Each player eats an equal amount of pizza. Altogether, the soccer team ate $\frac{4}{5}$ of the pizzas.

Part A
How many pizzas did the soccer team eat? Show your work.

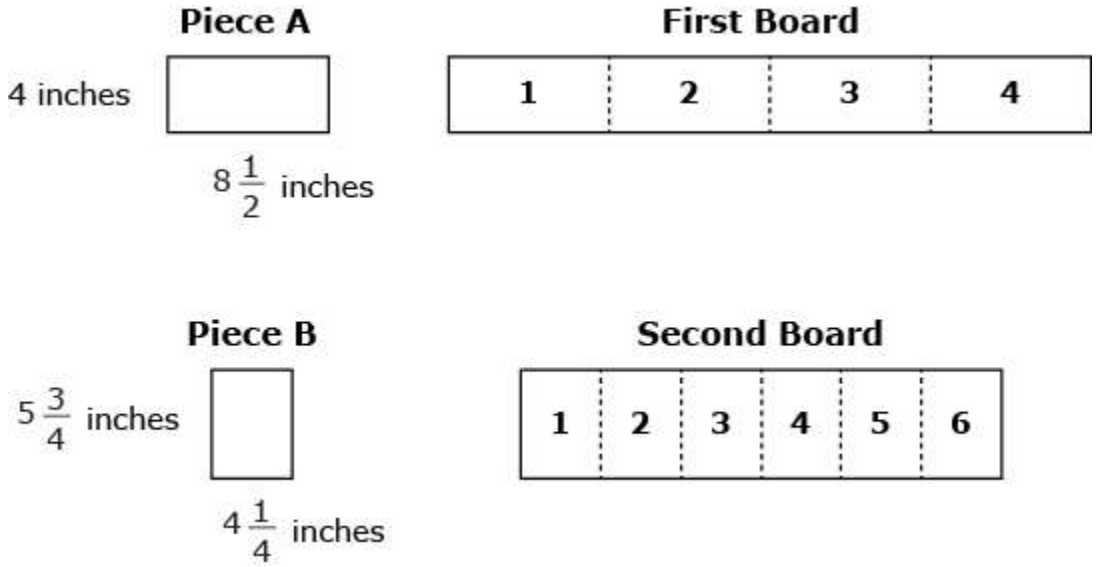
Part B
What fraction of a pizza did each player eat? Explain your answer.

Part C
What was the cost per pizza? Show your work.

Part D
The players paid only for the amount of pizza they ate. How much does each player pay? Show your work.

---

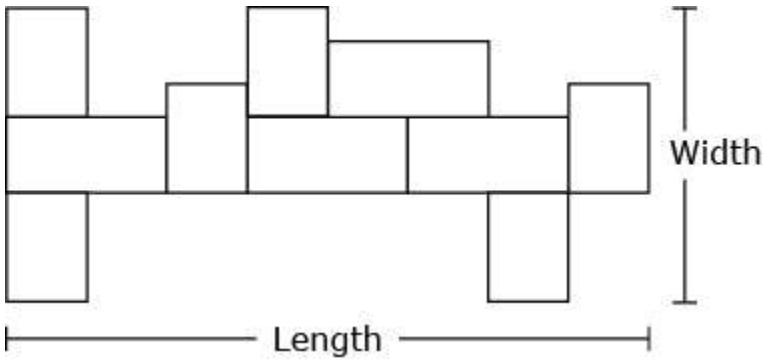
100. An artist is using rectangular pieces of wood to create a piece of art. He cuts each wooden board into congruent pieces, as shown in the diagram. The length of the first board was cut into 4 congruent pieces, and the length of the second board was cut into 6 congruent pieces.



Part A
What was the total length, in inches, of the first board used to cut the pieces labeled "Piece A"? Show your work.

Part B
What was the total length, in inches, of the second board used to cut the pieces labeled "Piece B"? Show your work.

Part C
All of the pieces will be painted and attached to a larger wooden base. The arrangement of all the pieces is shown in the diagram.



Write an expression that can be used to determine the minimum length of the wooden base

needed for this arrangement. Evaluate your expression and show your work.

Part D
Write an expression that can be used to determine the minimum width of the wooden base needed for this arrangement. Evaluate your expression and show your work.

---

101. A company's first shipment of the day contains two different sizes of boxes. The weight of each box and the quantity of each box size received are shown in the table.

First Shipment

Box Size	Weight (pounds)	Number of Boxes
Medium	$3\frac{3}{4}$	6
Large	$8\frac{1}{2}$	7

Part A
What is the total weight of all of the medium boxes in the first shipment? Show your work or explain your answer.

Part B
What is the total weight of all of the large boxes in the first shipment? Show your work or explain your answer.

Part C
The second shipment of the day contains 10 medium boxes and 10 large boxes. The boxes in the second shipment are heavier than the boxes in the first shipment.

- The medium boxes each weigh 2 times the weight of the medium boxes in the first shipment.
- The large boxes each weigh 3 times the weight of the large boxes in the first shipment.

Write an expression that can be used to determine the combined weight of the boxes in the second shipment. Evaluate your expression and show your work.

---

102. A restaurant is having a sample dinner for 10 people. Each person will receive the same amount of several different foods from the restaurant's new menu.

Part A

The chef has 4 cups of spicy chicken and wants to give each person a $\frac{1}{3}$-cup serving. Explain why there is or is not enough spicy chicken to give each person a $\frac{1}{3}$-cup serving.

Part B

The chef has prepared $3\frac{1}{2}$ cups of grilled vegetables. How many more cups of grilled vegetables does she need to prepare so that each person can be served $\frac{1}{2}$ cup?

Show your work or explain your answer.

Part C

Each person is served $\frac{2}{3}$ cup of steamed rice. The chef has $1\frac{5}{6}$ cups of steamed rice left over. How many cups of steamed rice did the chef have before serving it to the 10 people? Show your work or explain your answer.

103. Evan's mother used $\frac{1}{3}$ pound of beef, $\frac{1}{2}$ pound of shrimp, and 3 pounds of pasta to make dinner for 4 people.

Part A
Each person will receive an equal share of beef with none leftover. What is the amount, in pounds, of each serving of beef? Write your answer in fraction form and show your work.

Part B
Each person will receive an equal share of shrimp with none leftover. What is the amount, in pounds, of each serving of shrimp? Write your answer in fraction form and show your work.

Part C
Each person will receive an equal share of pasta with none leftover. What fraction represents the amount, in pounds, of each serving of pasta? Write your answer in fraction form.

Part D

Evan ate only $\frac{1}{2}$ of the pasta that he received. What is the amount, in pounds, of pasta that Evan ate? Write your answer in fraction form and show your work.

---

104. The fifth-grade students have signed up to keep a portion of the trail in a park near their school clean by going to the trail once a week to pick up and throw away trash found along the trail. The length of the trail the fifth-grade students will keep clean is $\frac{3}{4}$ of a mile. Each section of the trail is divided equally among the 6 classes of fifth-grade students.

Part A
Create a fraction model of the trail to determine the length, in miles, of each section of the trail. Label each section and explain your model.

Part B
Write an equation to represent your fraction model from Part A.

Part C

Each class is divided into groups. Each group will have $\frac{1}{32}$ of the trail. How many groups is each class divided into? Show your work or explain your answer.

---

105. The hiking trail in a park is 3 miles long. A distance marker has been placed every $\frac{1}{4}$ mile from the beginning of the trail to the end. What is the total number of distance markers on the trail?

A. 12

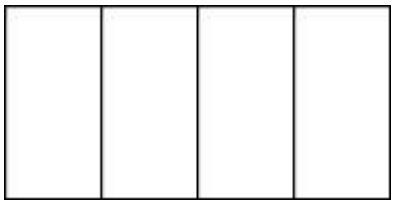
B. 7

C. $3\frac{1}{4}$

D. $2\frac{3}{4}$

---

106. Allie folded each of her 7 index cards into fourths and then cut the index cards so that each piece was $\frac{1}{4}$ the size of the original card.



How many pieces did she have after cutting the cards?

A. 28

B. $7\frac{1}{4}$

C. 4

D. $\frac{1}{4}$

---

107. The fraction of fifth-grade students at Melanie's school who have flown in an airplane is $\frac{1}{5}$.

Part A
Melanie divided the students who had flown in an airplane into 2 equal groups. Evaluate the expression $\frac{1}{5} \div 2$ to determine what fraction of the students was in each group. Show your work.

Part B

The fraction of students who have ridden a train is $\frac{1}{20}$. What is the difference between the fraction of students who have flown in an airplane and the fraction of students who have ridden a train? Show your work.

Part C
The number of fifth-grade students at Melanie's school is 80. How many of these students have NOT flown on an airplane? Explain your answer.

108. Marco has 6 cups of brown sugar. He is going to make muffins for a school fundraiser. Each batch of 10 muffins requires $\frac{1}{3}$ cup of brown sugar.

Part A
How many cups of brown sugar are in each muffin? Explain why you chose the operation you used.

Part B
What is the maximum number of batches of muffins that Marco can make with this amount of brown sugar? Use a visual model to explain your answer.

Part C
Prove your answer in Part B is correct using the relationship between multiplication and division.

Answer Key

1. C) 3

2. B) 70 million

3. A) three thousandths

4. B) 3.90

5. B) 1.41

6. C) 3,060,501

7.

8.

9.

10. A) The value of the number is ten times greater in the thousands place than the value of the number in the hundreds place.

11.

12.

13.

14. A) $3.2 \div 10^2$

15. B) 0.56

16.

17.

18.

19. C) $5 + 2\left(\frac{1}{10}\right) + 9\left(\frac{1}{1000}\right)$

20. C) 12,000.

21. C) 3.0 in.

22. D) 42.3 centimeters

23. B) 38

24. C) 6,000

25.

26.

27.

28. A) round to 26.98 because $1 < 5$

29. C) 14,400

30.

31.

32.

33. B) 896

34. D) 6,600

35.

36. A) 256

37.

38.

39.

40.

41. D) $5 + 5 \square 2 \times 5$

42. B) 22.86 meters

43. A) +

44. A) $4.92

45. D) 3.2

46. C) $5.13

47. B) 20

48. C) $5.45

49. A) $32.65

50. C) $3.00

51. D) ×

52. D) ÷

53. A) 0.003 in.

54. C) $7.07

55.

56.

57. C) 0.46

58.

59.

60.

61. B) $10.00

62. B) $\frac{3}{5}$

63. B) $\frac{7}{8}$ mile

64. A) $2\frac{5}{12}$

65.

66.

67.

68. D) Corn and Peas

69.

70. D) $\frac{20}{21}$

71. B) $\frac{2}{7}$

72.

73.

74.

75. C) No, because $\frac{4}{9}$ is less than $\frac{1}{2}$ so it will take him longer than 10 minutes to run 1 mile.

76.

77.

78.

79.

80.

81. D) Between 13 and 14

82. B) 6

83.

84.

85.

86.

87.

88.

89.

90.

91. D) The base is **less** than 6 and the height is **less** than 4, because when a number is multiplied by a fraction **less** than 1, the result is **less** than the number.

92.

93.

94. B) Miguel's class will have fewer students because $\frac{2}{3}$ is less than 1.

95.

96. D) 110,000

97.

98. A) $5\frac{5}{8}$

99.

100.

101.

102.

103.

104.

105. A) 12

106. A) 28

107.

108.
