Do NOT Affix Student ID Label Here

A

Student Name _____

School Name _____

District Name/LEA _____

PARCC

Grade 7

Mathematics

End-of-Year Assessment Practice Test

B Last Name | First Name | MI

C Place the Student ID Label Here

D Gender

○ Female ○ Male

E Date of Birth

Day		Month	Year			
0	0	○ Jan		0	0	0
1	1	○ Feb	1		1	1
2	2	○ Mar	2		2	2
3	3	○ Apr			3	3
	4	○ May			4	4
	5	○ Jun			5	5
	6	○ Jul			6	6
	7	○ Aug			7	7
	8	○ Sep			8	8
	9	○ Oct		9	9	9
		○ Nov				
		○ Dec				

School Use Only

F State Student Identifier

Unit 1

Directions:

Today, you will be taking Unit 1 of the Grade 7 Mathematics End-of-Year Assessment Practice Test.

Read each question carefully. Some questions will ask you to choose one correct answer, while others will ask you to choose more than one correct answer. Mark your answers by filling in the circles in your test booklet for the answers you choose.

Do not make any stray marks on the test booklet. If you need to change an answer in your test booklet, be sure to erase your first answer completely.

Calculator Directions:

In the first section of this unit, you may not use a calculator. You will not be allowed to return to the non-calculator section of the test after you have started the calculator section of the test.

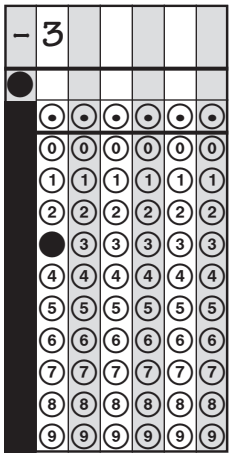
If you do not know the answer to a question, skip it and go on. If you finish the non-calculator section of Unit 1 early, you may review your answers and any questions you may have skipped in the non-calculator section ONLY.

Do NOT go on to the calculator section in Unit 1 until directed to do so.

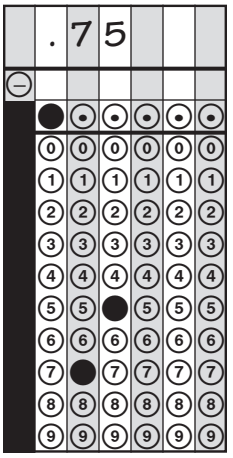
Directions for Completing the Answer Grids

1. Work the problem and find an answer.
2. Write your answer in the boxes at the top of the grid.
   - Print only one digit or symbol in each box. You may not need all the boxes to enter an answer, but do not leave a blank box in the middle of an answer.
3. Under each box in which you wrote your answer, fill in the bubble that matches the number or symbol you wrote above.
   - Fill in one and ONLY one bubble for each box. Do not fill in a bubble under an unused box.
   - Fill in each bubble by making a solid mark that completely fills the circle.
   - Fractions cannot be entered into an Answer Grid and will not be scored. Enter fractions as decimals.
4. See below for examples on how to correctly complete an answer grid.

To answer −3 in a question, fill in the answer grid as follows:



To answer .75 in a question, fill in the answer grid as follows:



GO ON TO NEXT PAGE

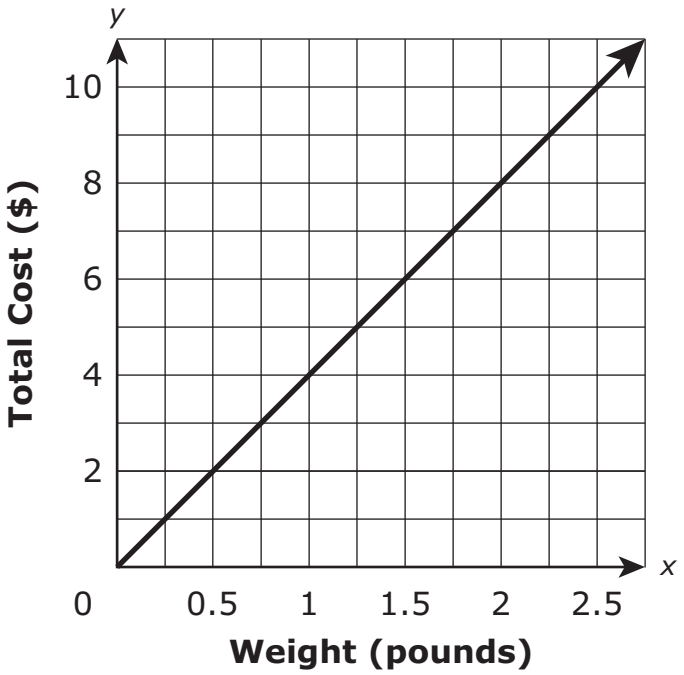
Unit 1 - Section 1 (Non-Calculator)

This unit has two sections: a non-calculator and a calculator section.

You will now take the first section of this unit in which you may not use a calculator. You will not be allowed to return to the non-calculator section of the test after you have started the calculator section. You will need to finish both sections within the allotted testing time.

Once you finish the non-calculator section, read the directions in your test booklet on how to continue.

1. This graph shows the relationship between the pounds of cheese bought at a deli and the total cost, in dollars, for the cheese.



Select **each** statement about the graph that is true.

Select **all** that apply.

Ⓐ The point (0, 0) shows the cost is $0.00 for 0 pounds of cheese.

Ⓑ The point (0.25, 1) shows the cost is $0.25 for 1 pound of cheese.

Ⓒ The point (0.5, 2) shows that 0.5 pound of cheese costs $2.00.

Ⓓ The point (1, 4) shows the cost is $4.00 for 1 pound of cheese.

Ⓔ The point (2, 8) shows that 8 pounds of cheese cost $2.00.

2. Which expressions are equivalent to $-2.5(1 - 2n) - 1.5n$?

Select **all** that apply.

Ⓐ $-2.5 - 3.5n$

Ⓑ $-2.5 + 3.5n$

Ⓒ $-2.5 - 6.5n$

Ⓓ $-2.5 - n(5 - 1.5)$

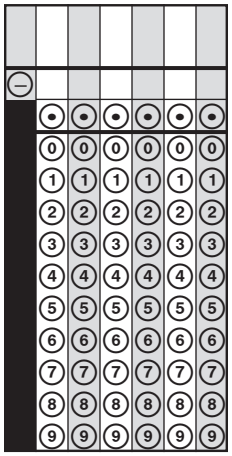
Ⓔ $-2.5 + n(5 - 1.5)$

3. This table shows a proportional relationship between x and y.

x	y
2	1.25
4	2.5
6	3.75
10	6.25

What is the constant of proportionality between x and y? Enter your answer as a decimal.

Enter your answer in the box.



4. Which expressions have products that are positive?

Select **all** that apply.

Ⓐ $(-5)(0.2)(-9)$

Ⓑ $\left(\frac{2}{3}\right)\left(\frac{3}{2}\right)\left(-\frac{1}{2}\right)$

Ⓒ $(6)(-3)(8)(-7)$

Ⓓ $\left(-4\frac{1}{3}\right)\left(-\frac{1}{4}\right)\left(-5\frac{1}{2}\right)\left(-\frac{7}{9}\right)$

Ⓔ $\left(\frac{5}{6}\right)(-10)\left(3\frac{4}{5}\right)(2)$

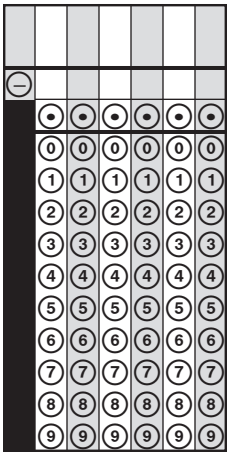
Ⓕ $(-1.2)(-3.5)(2.7)(-0.8)$

5. Devon exercised the same amount of time each day for 5 days last week.

- His exercise included walking and swimming.
- Each day he exercised, he walked for 10 minutes.
- He exercised for a total of 225 minutes last week.

What is the number of minutes Devon swam **each** of the 5 days last week?

Enter your answer in the box.



6. Which expressions are equivalent to $-3 - (7.5 + 4)$?

Select **all** that apply.

Ⓐ $(7.5 + 4) - 3$

Ⓑ $-(7.5 + 4) - 3$

Ⓒ $-(7.5 + 4) + 3$

Ⓓ $-3 - (4 + 7.5)$

Ⓔ $-(3 - 7.5) + 4$

Ⓕ $-3 + (-7.5 - 4)$

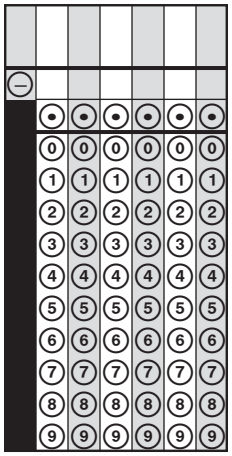
Ⓖ $-3 + (-7.5 + 4)$

7. Jessica rented 1 video game and 3 movies for a total of $11.50.

- The video game cost $4.75 to rent.
- The movies cost the same amount each to rent.

What amount, in dollars, did Jessica pay to rent each movie?

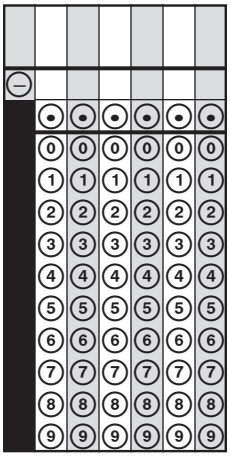
Enter your answer in the box.



8. At the start of the month, the value of an investment was $\$48.45$. By the end of the month, the value of the investment changed by a loss of $\$13.80$.

What was the value, in dollars, of the investment at the end of the month?

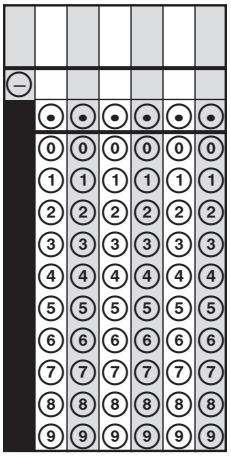
Enter your answer in the box.



9. Hayden mixed 6 cups of blue paint with 8 cups of yellow paint to make green paint. To represent the relationship between the number of cups of blue paint, b, and the number of cups of yellow paint, y, needed to make the same shade of green paint, Hayden wrote the equation $b = \square\, y$.

What number should be placed in the box?

Enter your answer in the box.



10. In which situation could the quotient of $-24 \div 3$ be used to answer the question?

Ⓐ The temperature of a substance decreased by 24°C per minute for 3 minutes. What was the overall change of the temperature of the substance?

Ⓑ A football team lost 24 yards on one play, then gained 3 yards on the next play. How many total yards did the team gain on the two plays?

Ⓒ Julia withdrew a total of $24 from her bank account over 3 days. She withdrew the same amount each day. By how much did the amount in her bank account change each day?

Ⓓ A cookie jar contains 24 cookies. Each child receives 3 cookies. How many children are there?

11. Two equations are shown.

- Equation 1: $-0.5x - 4 = 1.5$
- Equation 2: $-0.5(x - 4) = 1.5$

Select **each** statement that **must** be true.

Ⓐ x represents a negative value in both equations.

Ⓑ x represents a positive value in both equations.

Ⓒ x represents a positive value in one equation and a negative value in the other equation.

Ⓓ The value x represents in Equation 1 is less than the value x represents in Equation 2.

Ⓔ The value x represents in Equation 1 is greater than the value x represents in Equation 2.

12. In which of these situations would the answer to the question be 0?

Ⓐ Teddy jumped into a pool from a diving board 8 feet above the water. He sank 8 feet and then swam straight up to the surface of the water. How many feet did Teddy swim?

Ⓑ Jerry left his house and walked 1.5 miles directly west. Then he walked 1.5 miles directly east. At this point, how many miles was Jerry from his house?

Ⓒ A trail begins at an elevation of -50 feet. The trail ends at an elevation of 50 feet. By how many feet does the elevation of the trail change from beginning to end?

Ⓓ The low temperature one day was $-3°$ Celsius. The high temperature that day was $3°$ Celsius. What is the difference between the low temperature and the high temperature that day?

13. A garden is 15 feet long by 5 feet wide. The length and width of the garden will each be increased by the same number of feet. This expression represents the perimeter of the larger garden:

$$(x + 15) + (x + 5) + (x + 15) + (x + 5)$$

Which expression is equivalent to the expression for the perimeter of the larger garden?

Select **all** that apply.

Ⓐ $4x + 40$

Ⓑ $2(2x + 20)$

Ⓒ $2(x + 15)(x + 5)$

Ⓓ $4(x + 15)(x + 5)$

Ⓔ $2(x + 15) + 2(x + 5)$

14. Which expressions are equivalent to $3\frac{1}{4} - \left(-\frac{5}{8}\right)$?

Select **all** that apply.

Ⓐ $3\frac{1}{4} - \left(\frac{5}{8}\right)$

Ⓑ $3\frac{1}{4} + \left(\frac{5}{8}\right)$

Ⓒ $3\frac{1}{4} + \left(-\frac{5}{8}\right)$

Ⓓ $3\frac{1}{4} + \left(+\frac{5}{8}\right)$

Ⓔ $-3\frac{1}{4} + \left(-\frac{5}{8}\right)$

Ⓕ $-3\frac{1}{4} + \left(+\frac{5}{8}\right)$

15. Which expressions are a factor of $-48xyz - 24xy + 40xyz$?

Select **all** that apply.

Ⓐ 4

Ⓑ 24

Ⓒ $3x$

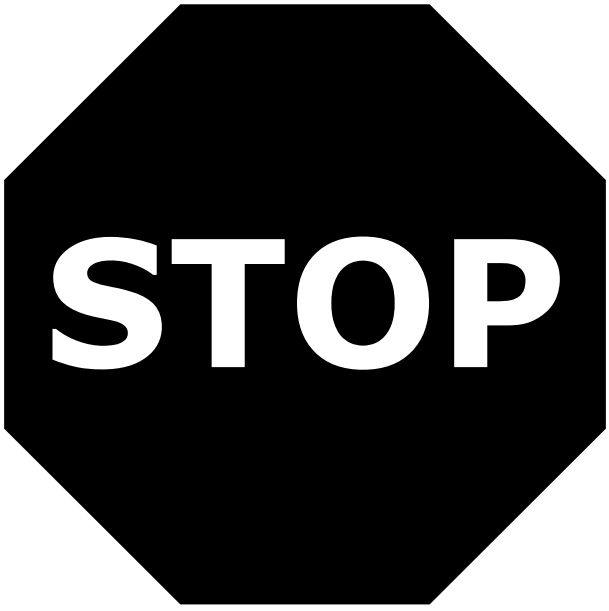
Ⓓ $8y$

Ⓔ $2xy$

Ⓕ $6xy$

Ⓖ xyz

STOP



You have come to the end of the non-calculator section in Unit 1 of the test.

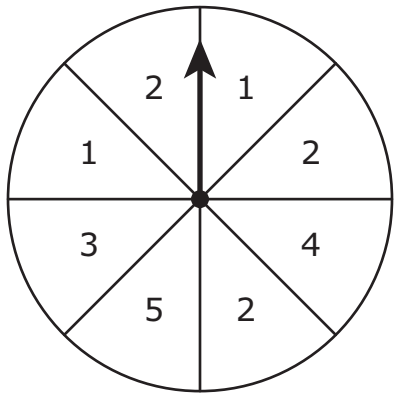
- **If you have time, review your answers in the non-calculator section ONLY. You will not be allowed to return to the non-calculator section once you have received your calculator.**
- **Then, raise your hand to receive your calculator before going on to the calculator section.**

Unit 1 - Section 2 (Calculator)

Once you have received your calculator, continue with the calculator section.

GO ON ▶

16. The spinner shown is divided into 8 equal sections.



The arrow on this spinner is spun once.

What is the probability that the arrow will land on a section labeled with a number **greater** than 3?

Ⓐ $\frac{1}{8}$

Ⓑ $\frac{1}{4}$

Ⓒ $\frac{1}{3}$

Ⓓ $\frac{1}{2}$

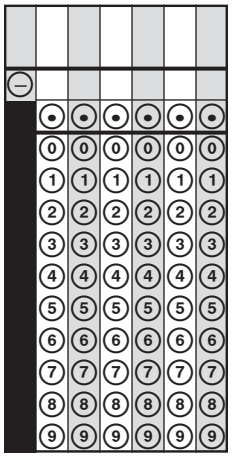
Use the information provided to answer Part A and Part B for question 17.

The scale on a map shows that 5 centimeters = 2 kilometers.

17. Part A

What number of centimeters on the map represents an actual distance of 5 kilometers?

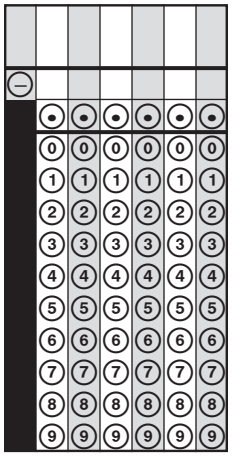
Enter your answer in the box.



Part B

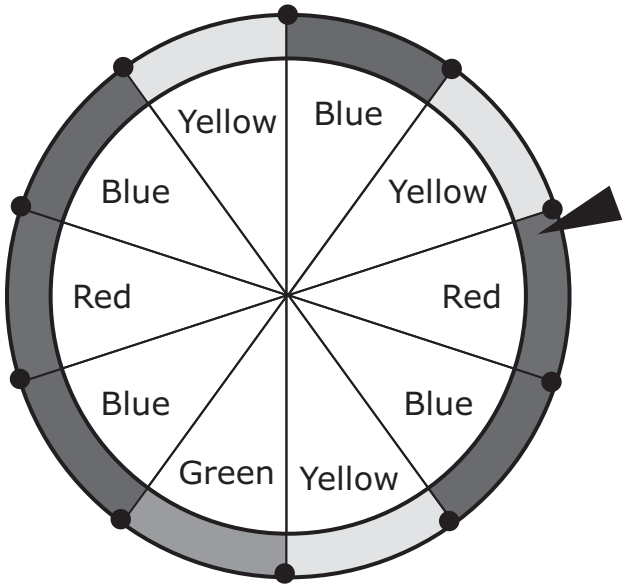
What is the actual number of kilometers that is represented by 2 centimeters on the map?

Enter your answer in the box.



18. Part A

A game at a carnival has 4 colors on a wheel, as seen in the diagram. Each section of the wheel is the same size.



Lori wants to design a computer simulation to study how many spins it takes to land on each color once. Using the digits 0 through 9, she will assign a digit to each section of the wheel. Which option describes how the digits can be assigned?

Ⓐ Assign the digit 0 to blue, 1 to yellow, 2 to red, and 3 to green.

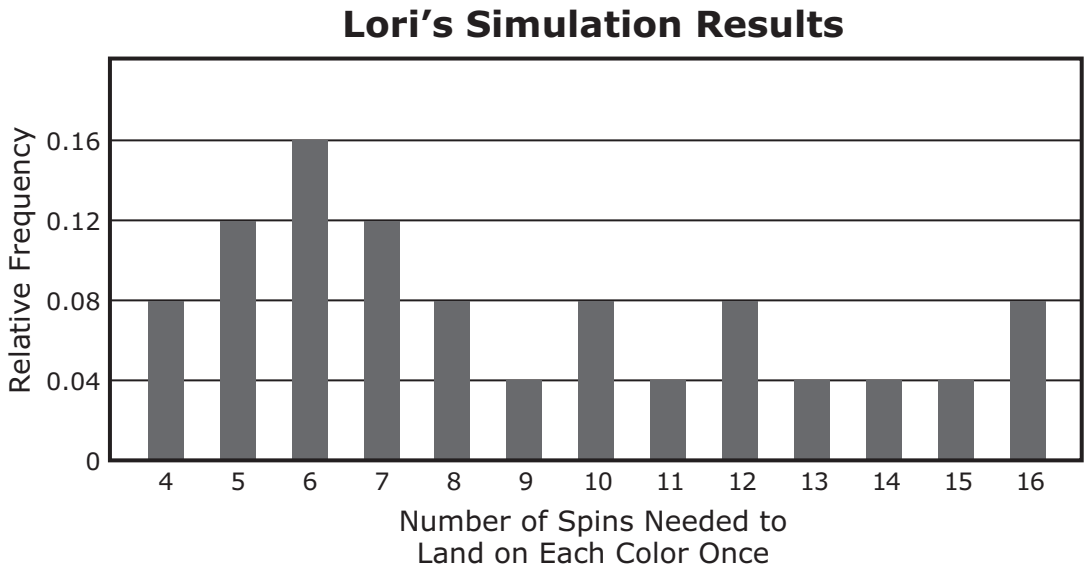
Ⓑ Assign the digit 4 to blue, 3 to yellow, 2 to red, and 1 to green.

Ⓒ Assign the digits 0, 1, and 2 to blue; 3, 4, and 5 to yellow; 6, 7, and 8 to red; and 9 to green.

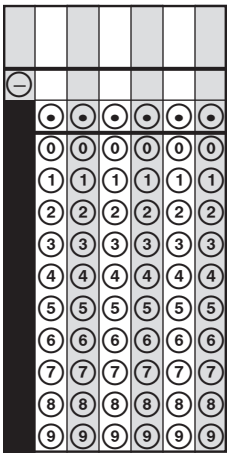
Ⓓ Assign the digits 0, 1, 2, and 3 to blue; 4, 5, and 6 to yellow; 7 and 8 to red; and 9 to green.

Part B

Lori designs a computer simulation with 25 trials and uses the data from the simulation to create a graph. The graph shows the relative frequency of the number of spins in her simulation to land on each color once. Using the graph, what is the probability that a player lands on each color once in less than 7 spins?



Enter your answer in the box.



19. Rosy waxes $\frac{2}{3}$ of her car with $\frac{1}{4}$ bottle of car wax.

At this rate, what fraction of the bottle of car wax will Rosy use to wax her entire car?

Ⓐ $\frac{1}{8}$

Ⓑ $\frac{1}{6}$

Ⓒ $\frac{3}{8}$

Ⓓ $\frac{3}{4}$

Use the information provided to answer Part A and Part B for question 20.

A circular mirror has a diameter of 12 inches.

20. Part A

What is the area, in square inches, of the mirror?

Ⓐ 6π

Ⓑ 12π

Ⓒ 36π

Ⓓ 72π

Part B

A circular frame that is 3 inches wide surrounds the mirror.

What is the combined area, in square inches, of the circular mirror and the frame?

Ⓐ 9π

Ⓑ 18π

Ⓒ 54π

Ⓓ 81π

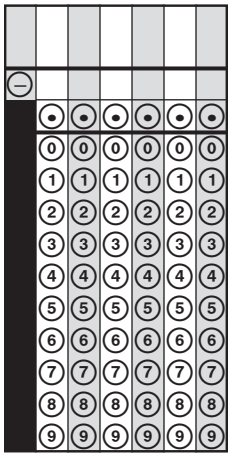
Use the information provided to answer Part A and Part B for question 21.

A store owner paid $15 for a book. She marked up the price of the book by 40% to determine its selling price.

21. Part A

What is the selling price, in dollars, of the book?

Enter your answer in the box.

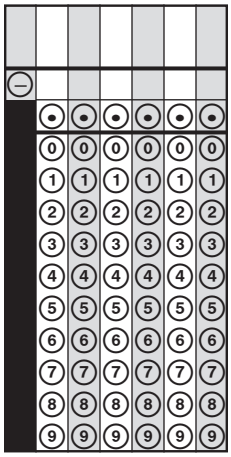


Part B

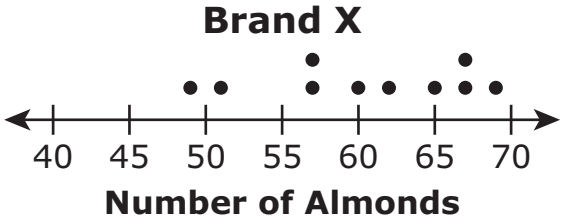
A customer buys a different book that has an original selling price of $38. The book is discounted 25%. The customer must pay a 6% sales tax on the discounted price of the book.

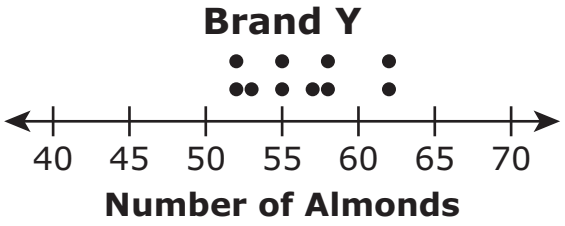
What is the total amount, in dollars, the customer pays for the discounted book?

Enter your answer in the box.



22. Alexis chose a random sample of 10 jars of almonds from each of two different brands, X and Y. Each jar in the sample was the same size. She counted the number of almonds in each jar. Her results are shown in the plots.





Based on the plots, which statement **best** compares the number of almonds in the jars from the two brands?

Ⓐ The number of almonds in jars from Brand X tends to be greater and more consistent than those from Brand Y.

Ⓑ The number of almonds in jars from Brand X tends to be greater and less consistent than those from Brand Y.

Ⓒ The number of almonds in jars from Brand X tends to be fewer and more consistent than those from Brand Y.

Ⓓ The number of almonds in jars from Brand X tends to be fewer and less consistent than those from Brand Y.

23. A train traveled $\frac{1}{5}$ of the distance between two cities in $\frac{3}{4}$ hour.

At this rate, how many hours will it take the train to travel the entire distance between these two cities?

Ⓐ $\frac{3}{20}$

Ⓑ $\frac{4}{15}$

Ⓒ $3\frac{3}{4}$

Ⓓ $6\frac{2}{3}$

Use the information provided to answer Part A and Part B for question 24.

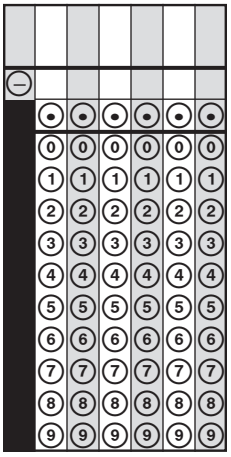
Each bulleted statement describes how the amount of income tax is determined for yearly taxable incomes in different ranges.

- Yearly taxable incomes of $8,925 or less are taxed at a flat rate of 10%.
- For yearly taxable incomes from $8,926 to $36,250, the first $8,925 is taxed at 10% and any income beyond $8,925 is taxed at 15%.
- For yearly taxable incomes greater than $36,250, the first $8,925 is taxed at 10%, the next $27,325 is taxed at 15%, and any income beyond $36,250 is taxed at 25%.

24. Part A

Mr. Vance's yearly taxable income is $35,675. What is the dollar amount taken out for taxes based on Mr. Vance's taxable income?

Enter your answer in the box.



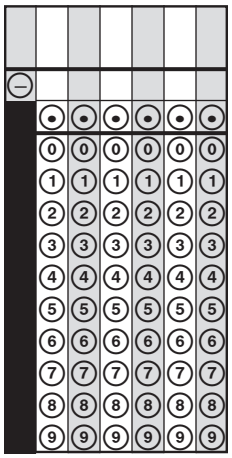
GO ON ▶

Part B

Mr. Rivera's taxable income is $20 each hour before taxes are taken out. Mr. Rivera worked a total of 40 hours each week for 50 weeks.

What is the dollar amount, to the nearest dollar, taken out for taxes based on Mr. Rivera's taxable income?

Enter your answer in the box.



Use the information provided to answer Part A and Part B for question 25.

The students in Naomi's class sold calendars for a fund-raiser this year and last year.

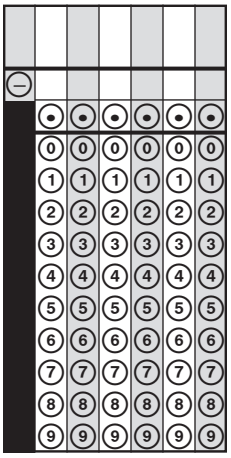
This year, the selling price of each calendar was $13.25.

The price this year represents 6% more than the selling price of each calendar last year.

25. Part A

What was the selling price, in dollars, of each calendar last year?

Enter your answer in the box.



Part B

The students in Naomi's class earned 20% of the money received from selling these calendars.

- They sold 650 calendars last year.
- They sold 600 calendars this year.

Based on the information, which statement is true?

Ⓐ The students in Naomi's class earned more money from this fund-raiser last year by $20.

Ⓑ The students in Naomi's class earned more money from this fund-raiser last year by $35.

Ⓒ The students in Naomi's class earned more money from this fund-raiser this year by $20.

Ⓓ The students in Naomi's class earned more money from this fund-raiser this year by $35.

26. Misha has a cube and a right-square pyramid that are made of clay. She placed both clay figures on a flat surface.

Misha will make slices through each figure that are parallel and perpendicular to the flat surface. Which statements are true about the two-dimensional plane sections that **could** result from one of these slices?

Select **all** that apply.

Ⓐ A plane section that is triangular could result from one of these slices through the cube.

Ⓑ A plane section that is square could result from one of these slices through the cube.

Ⓒ A plane section that is rectangular but not square could result from one of these slices through the cube.

Ⓓ A plane section that is triangular could result from one of these slices through the pyramid.

Ⓔ A plane section that is square could result from one of these slices through the pyramid.

Ⓕ A plane section that is rectangular but not square could result from one of these slices through the pyramid.

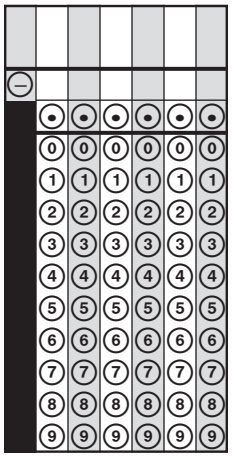
Use the information provided to answer Part A through Part D for question 27.

The directions on a bottle of vinegar say, "mix 1 cup of vinegar with 1 gallon of water to make a cleaning solution." The ratio of vinegar to water is 1 to 16.

27. Part A

How many **cups** of water should be mixed with $\frac{1}{4}$ cup of vinegar to make the cleaning solution?

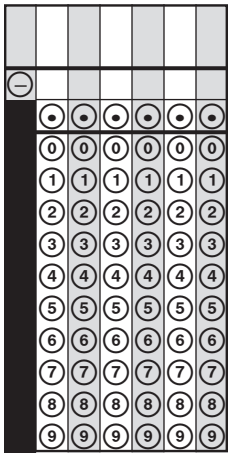
Enter your answer in the box.



Part B

How many **fluid ounces** of vinegar should be mixed with 80 fluid ounces of water to make the cleaning solution?

Enter your answer in the box.

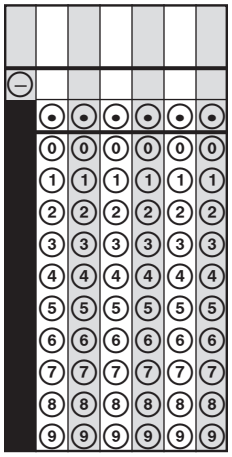


Part C

The bottle contains 1 quart of vinegar.

What is the **total number of quarts of cleaning solution** that can be made using the entire bottle of vinegar?

Enter your answer in the box.



Part D

A spray bottle holds up to 1 cup of the cleaning solution.

When the spray bottle is full, what fraction of the cleaning solution is vinegar?

Ⓐ $\frac{1}{17}$

Ⓑ $\frac{1}{16}$

Ⓒ $\frac{15}{16}$

Ⓓ $\frac{16}{17}$

28. Josephine owns a diner that is open every day for breakfast, lunch, and dinner. She offers a regular menu and a menu with daily specials. She wanted to estimate the percentage of her customers who order specials. She selected a random sample of 50 customers who had lunch at her diner during a three-month period. She determined that 28% of these customers ordered from the menu with specials.

Which statement about Josephine's sample is true?

Ⓐ The sample is the percentage of customers who order daily specials.

Ⓑ The sample might not be representative of the population because it only included lunch customers.

Ⓒ The sample shows that exactly 28% of Josephine's customers ordered daily specials.

Ⓓ No generalizations can be made from this sample, because the sample size of 50 is too small.

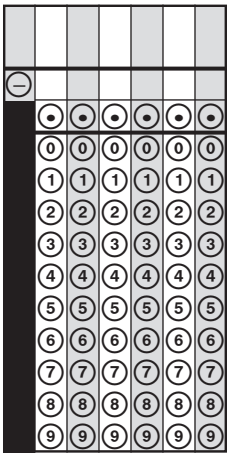
Use the information provided to answer Part A and Part B for question 29.

Today, Joelle walked 20 minutes at a rate of 3 miles per hour, and she ran 15 minutes at a rate of 6 miles per hour.

29. Part A

How many total miles did Joelle travel while walking and running?

Enter your answer in the box.



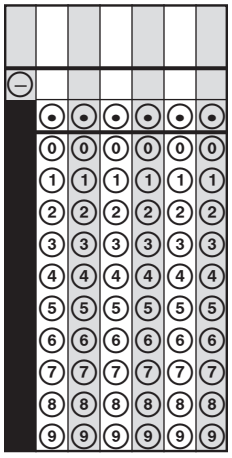
GO ON ▶

Part B

Tomorrow, Joelle wants to travel a total of 4 miles by walking and running. She plans to run for 20 minutes at a rate of 6 miles per hour.

How many **minutes** should she walk at a rate of 3 miles per hour to finish traveling the 4 miles?

Enter your answer in the box.



GO ON ▶

30. Select **each** option that represents a proportional relationship between x and y.

Ⓐ

x	y
$1\frac{1}{2}$	6
$3\frac{1}{4}$	13
7	28

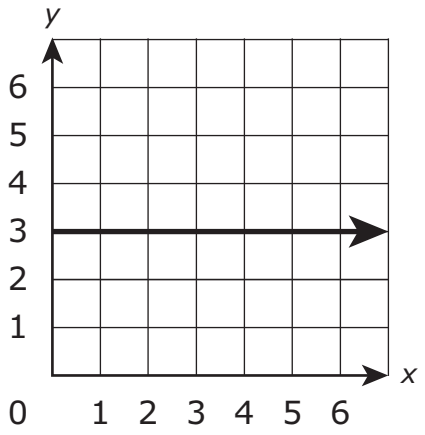
Ⓑ

x	y
4	1
5	2
9	6

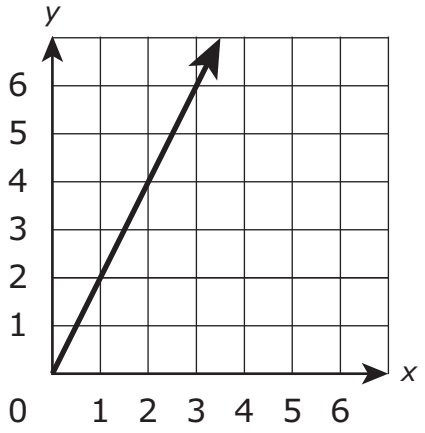
Ⓒ $y = \frac{7}{8}x$

Ⓓ $y = x + 1$

Ⓔ



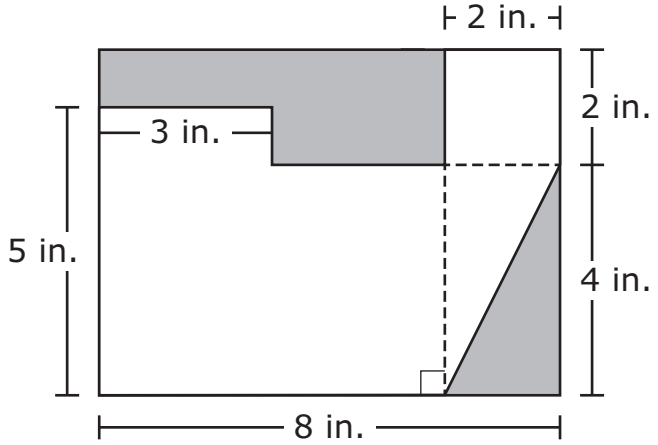
Ⓕ



GO ON ▶

Use the information provided to answer Part A and Part B for question 31.

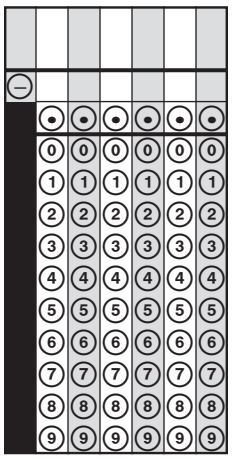
This figure shows two shaded regions and a non-shaded region. Angles in the figure that appear to be right angles are right angles.



31. Part A

What is the area, in square inches, of the triangular-shaped region that is shaded in this figure?

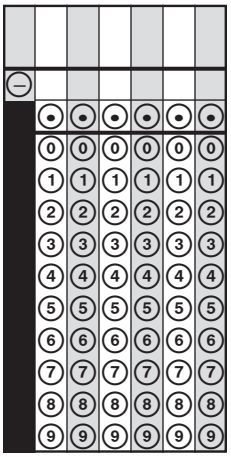
Enter your answer in the box.



Part B

What is the area, in square inches, of the non-shaded region in this figure?

Enter your answer in the box.



32. Reagan will use a random number generator 1,200 times. Each result will be a digit from 1 to 6. Which statement **best** predicts how many times the digit 5 will appear among the 1,200 results?

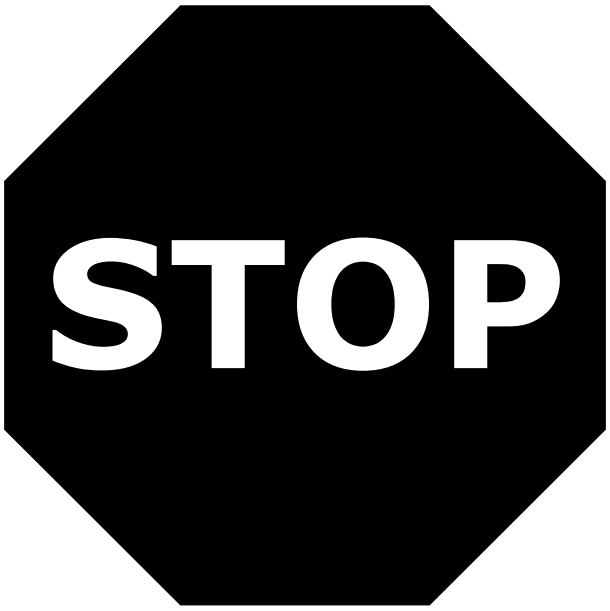
Ⓐ It will appear exactly 200 times.

Ⓑ It will appear close to 200 times but probably not exactly 200 times.

Ⓒ It will appear exactly 240 times.

Ⓓ It will appear close to 240 times but probably not exactly 240 times.

STOP



You have come to the end of the calculator section in Unit 1 of the test.

- **Review your answers in the calculator section of Unit 1 only.**
- **Then, close your test booklet and raise your hand to turn in your test materials.**

7 - MTH

194815-001 1 2 3 4 5 A B C D E Printed in the USA ISD11297