# GRADE 6 SAMPLE ITEMS

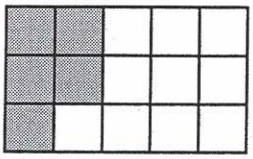
**1. Place Value - MC**

In which number does the 2 have the **least** value?

- ○ 2954
- ○ 3286
- ○ 6125
- ⊙ 9052

**2. Pictorial Representation of Numbers - MC**

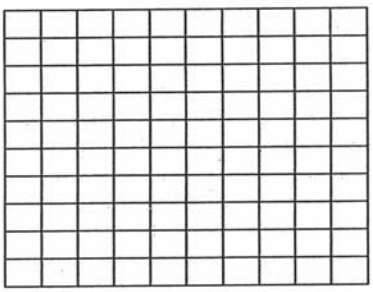
What fractional part of the figure is shaded?



- ○ $\frac{1}{15}$
- ⊙ $\frac{1}{3}$
- ○ $\frac{1}{5}$
- ○ $\frac{3}{5}$

**2. Pictorial Representation of Numbers - OE**

Shade in 0.85 of this figure.



Each □ = 0.01

**3. Equivalent Fractions, Decimals and Percents - MC**

Which fraction means the same as 0.5?

- ○ $\frac{1}{10}$
- ○ $\frac{1}{5}$
- ⊙ $\frac{1}{2}$
- ○ $\frac{5}{100}$

**4. Order, Magnitude and Rounding of Numbers - MC**

2 The chart shows the time Trent spent walking his dog each day this week.

**Time Spent Dog Walking**

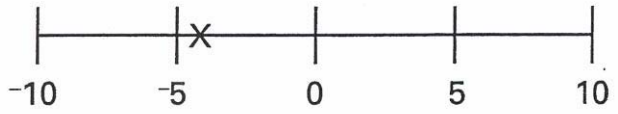
| Day | Dog Walking (in hours) |
|---|---|
| Monday | $1\frac{1}{4}$ |
| Tuesday | $\frac{3}{4}$ |
| Wednesday | $\frac{1}{2}$ |
| Thursday | 1 |
| Friday | $1\frac{1}{2}$ |

Which list shows the days in order from the **most** time to the **least** time spent walking the dog?

- ○ **Monday, Wednesday, Thursday, Tuesday, Friday**
- ○ **Friday, Monday, Tuesday, Thursday, Wednesday**
- ○ **Wednesday, Thursday, Tuesday, Monday, Friday**
- ⊙ **Friday, Monday, Thursday, Tuesday, Wednesday**

**4. Order, Magnitude and Rounding of Numbers - MC**

12 The "x" on the number line **most** likely represents which integer?




- ○ 4
- ○ -1
- ◉ -4
- ○ -6

**5. Models for Operations - OE**

Write a story problem that can be solved using the number sentence

$7.96 − $0.49 = □.

**S2A** Write a story problem that can be solved using the number sentence

$7.96 − $0.49 = □.

Joey had $7.96 when he went to Ada's to buy some candy. When he got there he only wanted a peice of gum which cost him 49¢. How much did he have left after buying the gum?

2

**S2B** Write a story problem that can be solved using the number sentence

$7.96 − $0.49 = □.

Ashley has $7.96. So she goes to the store she buys 2 lolly pops for 49¢. How much money will she have left.

$$\begin{array}{r} {}^{6}\cancel{7}.{}^{8}\cancel{9}6 \\ -\ .49 \\ \hline 6.47 \end{array}$$

2

**S2C** Write a story problem that can be solved using the number sentence

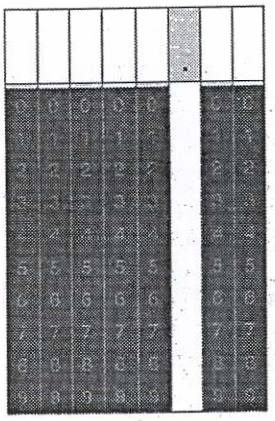
$7.96 − $0.49 = □.

I went to the mall with $7.96 in my pocket I bought a pencil for 49¢ I had $7.47 left.

2

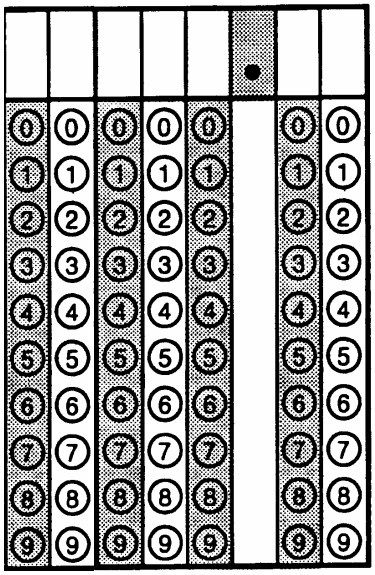
## 6. Basic Facts - GR

$6 \times 7 = \square$



## 7. Computations with Whole Numbers and Decimals - GR

1170 + 790 =



**7. Computations with Whole Numbers and Decimals - MC**

$9.3 \times 2 =$

- ○ 1860
- ○ 186
- ◉ 18.6
- ○ 1.86

**8. Computations with Fractions and Integers - MC**

$\frac{1}{5} \times 4 =$

- ○ $\frac{1}{20}$
- ◉ $\frac{4}{5}$
- ○ $1\frac{1}{4}$
- ○ 20

**9. Solve Word Problems - MC**

Derrick jogs 1.7 miles every day. How many miles did he jog in 14 days?

- ○ 238
- ○ 218
- ◉ 23.8
- ○ 21.8

## 9. Solve Word Problems - OE

**S-1** Donyiel found some rocks for his collection that cost $1.65 each and decided to buy 5 of them. He paid for the rocks with a ten dollar bill. How much change did he receive? Show

**S1A** Donyiel found some rocks for his collection that cost $1.65 each and decided to buy 5 of them. He paid for the rocks with a ten dollar bill. How much change did he receive? Show your work or explain how you found your answer.

Donyiel had to multiply $1.65 x 5 & it will come up to 8.25. So if he had $10.00 the change will be $1.75 from $10. DOLLAR Bill.

2

**S1B** Donyiel found some rocks for his collection that cost $1.65 each and decided to buy 5 of them. He paid for the rocks with a ten dollar bill. How much change did he receive? Show your work or explain how you found your answer.

$1.65
x 5
8.25

$10.00
-8.25
$1.75

He recieved $1.75.

2

**S1C** Donyiel found some rocks for his collection that cost $1.65 each and decided to buy 5 of them. He paid for the rocks with a ten dollar bill. How much change did he receive? Show your work or explain how you found your answer.

His change was $1.75 because I multiplied 1.65x5. Then I subtracted the answer from 10.00.

2

## 10. Numerical Estimation Strategies - MC

To estimate the product of 187.3 X 29.4, Deirdre multiplied 190 x 30. Would Deirdre's **estimate** be **more** or **less** than the actual product?

- ○ **less**, because she rounded both numbers up
- ⊙ **more**, because she rounded both numbers up
- ○ **less**, because she rounded both numbers down
- ○ **more**, because she rounded both numbers down

## 11. Estimating Solutions to Problems - MC

Charlie bought a telescope for $148.95 including tax. He gave the clerk $200. Which of the following is a **reasonable** estimate for the change Charlie should receive?

- ○ A little less than $60
- ○ A little more than $60
- ○ A little less than $50
- ⊙ A little more than $50

## 11. Estimating Solutions to Problems - OE

S-4 Tricia's biology class lasts 48 minutes each day. She noticed there are 19 school days in October.

Is Tricia's estimate of 1000 minutes a **reasonable** estimate of the number of minutes for biology class during October?

Show your work or explain if this is a **reasonable** estimate.

## 12. Ratios and Proportions - MC

Tina figured she was charged 5¢ for every 1 minute she talked on the phone to her aunt. Which shows this same ratio?

- ○ 10¢ for every 3 minutes
- ○ 20¢ for every 5 minutes
- ○ 30¢ for every 4 minutes
- ◉ 40¢ for every 8 minutes

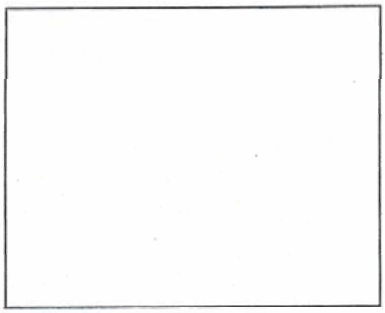
## 15. Approximating Measures - MC

What is the approximate measure of the angle shown above?

- ○ 100°
- ○ 110°
- ◉ 170°
- ○ 190°

## 16. Customary and Metric Measures - OE

S-3 Use your ruler to measure the lengths of the sides. Label each length in inches. What is the **area** of this figure in square inches?



Area: _____

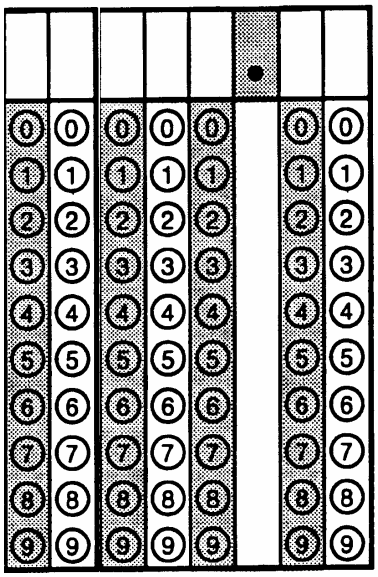
## 16. Customary and Metric Measures - MC

Trina had a package that weighed 5.5 kilograms. How many grams is that?

- ○ 505
- ○ 550
- ○ 5050
- ◉ 5500

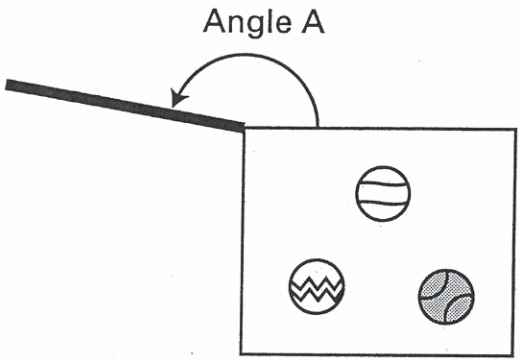
## 16. Customary and Metric Measures - GR

Anna picked 8 pints of strawberries. How many **quarts** of strawberries did she pick?



**17. Geometric Shapes and Properties - MC**

This side view of a toy box shows the door open 170°.

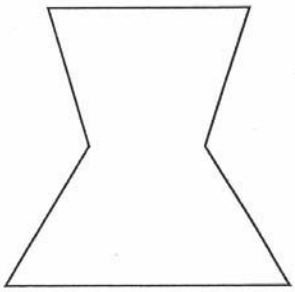



What type of angle is Angle A?

- ○ Straight
- ◉ Obtuse
- ○ Acute
- ○ Right

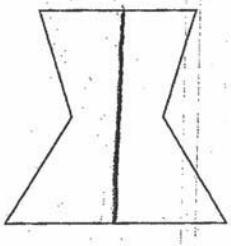
## 18. Spatial Relationships - OE

**S-4** Draw a line of symmetry on the figure below.



Explain how you know it is a line of symmetry.

**S4A** Draw a line of symmetry on the figure below.

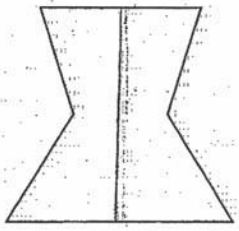


Explain how you know it is a line of symmetry.

I put the line there because a line of symmetry is a shape that you cut it in two congruent parts

**2**

**S4B** Draw a line of symmetry on the figure below.

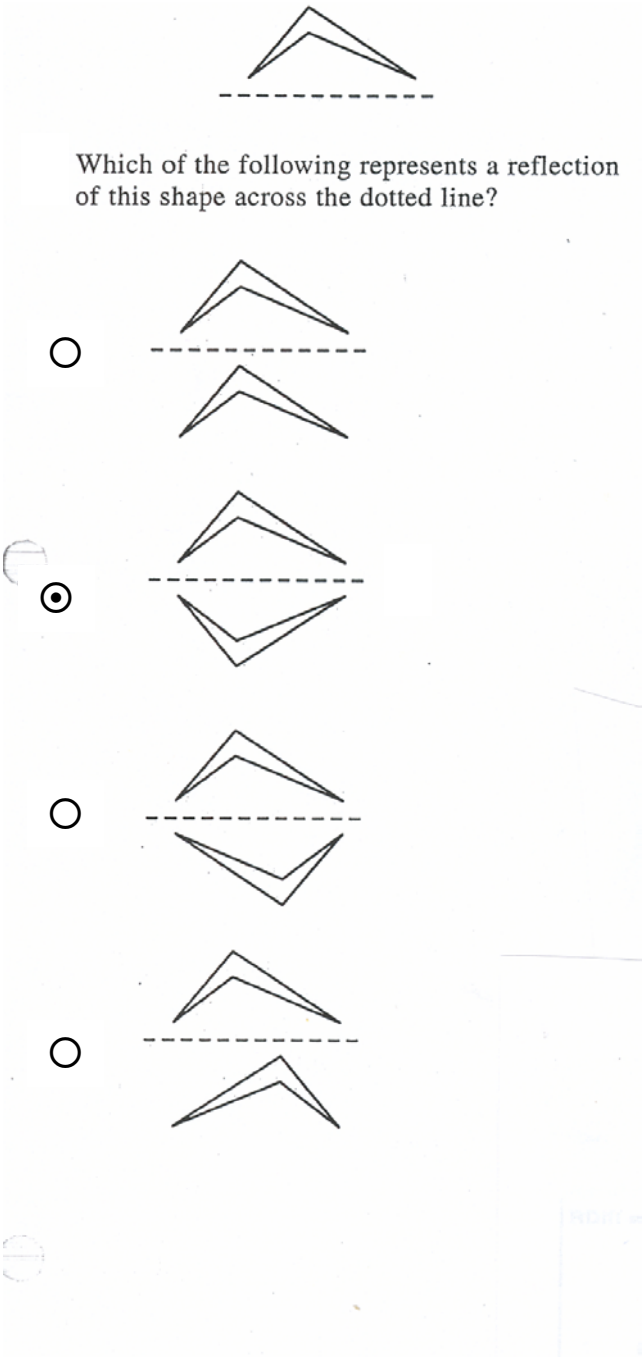


Explain how you know it is a line of symmetry.

I know this is a line of symetry because if you fold it in half it will be even.

**2**

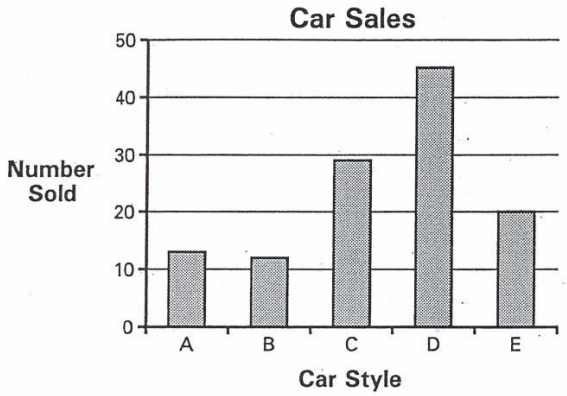
**18. Spatial Relationships - MC**



Which of the following represents a reflection of this shape across the dotted line?

## 20. Statistics and Data Analysis - MC

This graph shows the number of cars sold in one year.




Which 3 cars' combined sales are **about** as much as Car Style D?

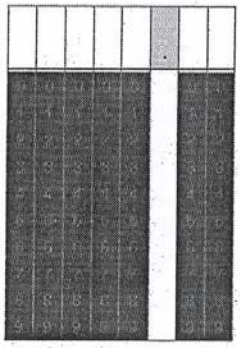
- ○ A, B, and C
- ◉ A, B, and E
- ○ A, C, and E
- ○ B, C, and E

## 20. Statistics and Data Analysis - GR

Sarina asked 7 girls in her class how many CDs they buy in a typical month. These are the results.

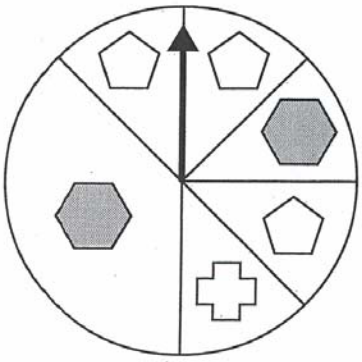
3, 7, 0, 4, 6, 4, 2

What is the **median** number of CDs bought?



## 21. Probability - MC

If Ahmad spins this spinner once, what is the probability that the arrow will land on a  ?



- ○ $\frac{2}{6}$
- ○ $\frac{3}{8}$
- ◉ $\frac{1}{2}$
- ○ $\frac{7}{8}$

## 21. Probability - OE

**S-5** The table shows the number and color of gumballs Darlene has in a bag.

| Color of Gumball | Number |
|---|---|
| Black | 3 |
| Blue | 2 |
| White | 1 |
| Green | 2 |
| Yellow | 2 |
| Red | 5 |

What is the probability that Darlene will pull out a Red, White, or Blue gumball **without looking**? _____

Show your work or explain how you found your answer.

S5I The table shows the number and color of gumballs Darlene has in a bag.

| Color of Gumball | Number |
|---|---|
| Black | 3 |
| Blue | 2 |
| White | 1 |
| Green | 2 |
| Yellow | 2 |
| Red | 5 |

0

What is the probability that Darlene will pull out a Red, White, or Blue gumball without looking? 7 to 8

Show your work or explain how you found your answer.

I got my answer by adding the amount of Black, white, and Green gum balls. Then I added the amount of Red, white, and blue gum balls

**22. Patterns - MC**

These figures follow a growing pattern.

Which figure is next in this pattern?

○ 

○ 

○ 

⊙ 

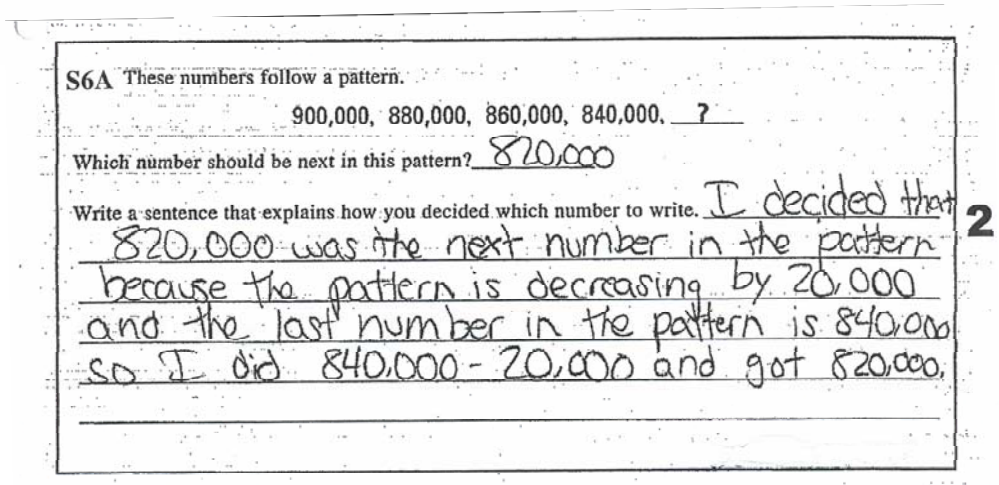
## 22. Patterns - OE

**S-6** These numbers follow a pattern.

900,000, 880,000, 860,000, 840,000, ___?___

Which number should be next in this pattern?_____

Write a sentence that explains how you decided which number to write.



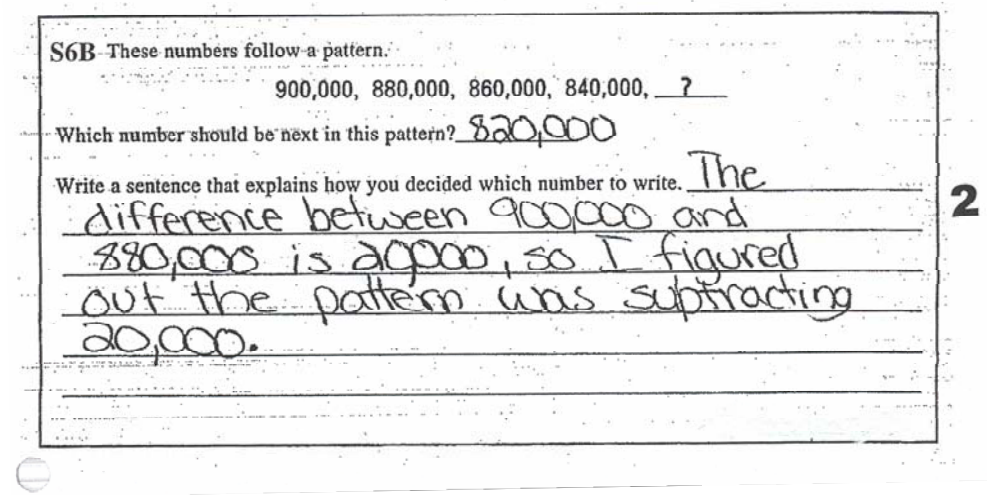
**S6A** These numbers follow a pattern.

900,000, 880,000, 860,000, 840,000, ___?___

Which number should be next in this pattern? 820,000

Write a sentence that explains how you decided which number to write. I decided that 820,000 was the next number in the pattern because the pattern is decreasing by 20,000 and the last number in the pattern is 840,000 so I did 840,000 - 20,000 and got 820,000.

2



**S6B** These numbers follow a pattern.

900,000, 880,000, 860,000, 840,000, ___?___

Which number should be next in this pattern? 820,000

Write a sentence that explains how you decided which number to write. The difference between 900,000 and 880,000 is 20000, so I figured out the pattern was subtracting 20,000.

2

S6I These numbers follow a pattern.

900,000, 880,000, 860,000, 840,000, ?

Which number should be next in this pattern? 8,000

Write a sentence that explains how you decided which number to write.

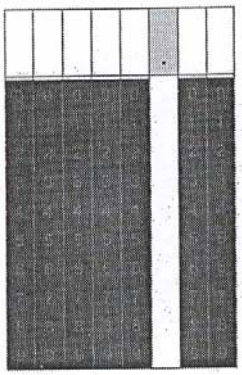
BC cows 8,000 is after 840000

0

**23. Algebraic Concepts - GR**

What is the value of $x$ in this equation?

$$x - 15.2 = 16.1$$



**23. Algebraic Concepts - MC**

Solve this equation for $n$.

$244 \times n = 3{,}172$

- ○ 10
- ◉ 13
- ○ 17
- ○ 24

## 24. Classification and Logical Reasoning - MC

Four CDs were in a CD player. The first CD was not country. The hip-hop CD was immediately before the rap CD. The jazz CD was third. In what order were the CDs in the CD player?

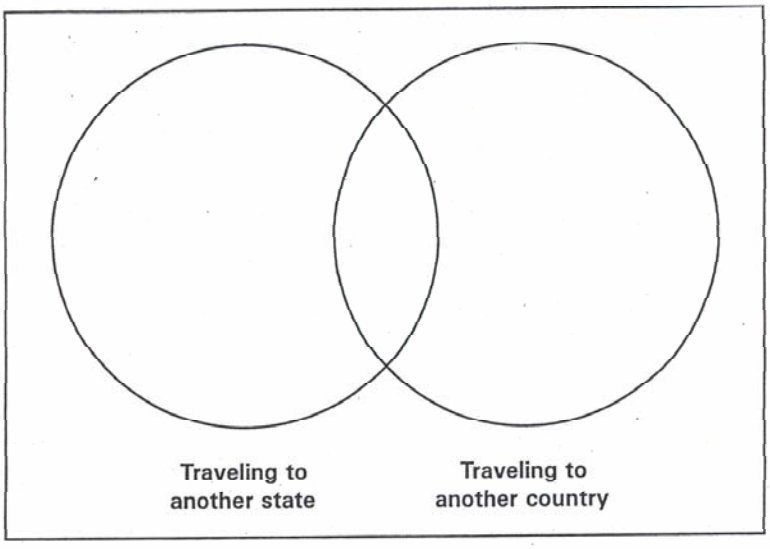
- ◉ Hip-hop, Rap, Jazz, Country
- ○ Hip-hop, Rap, Country, Jazz
- ○ Country, Rap, Jazz, Hip-hop
- ○ Country, Jazz, Rap, Hip-hop

## 24. Classification and Logical Reasoning - OE

**S-6** A survey was conducted in an airport, and people were asked where they were traveling. Of the 75 people who answered the question:

- A total of 59 said they were traveling to another state.
- A total of 17 said they were traveling to another country.
- 5 said they were traveling both to another state and another country.
- 4 said they were doing neither.

Use the Venn diagram to help you solve the problem.




a. How many people were traveling **only** to another state? _____

b. How many people were traveling **only** to another country? _____

**S6I** A survey was conducted in an airport, and people were asked where they were traveling. Of the 75 people who answered the question:

- A total of 59 said they were traveling to another state.
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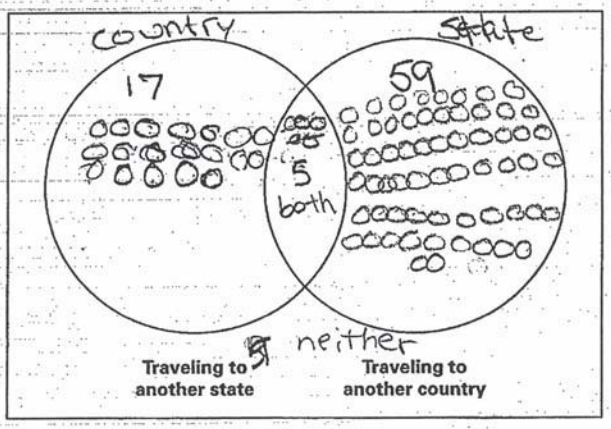


a. How many people were traveling **only** to another state? 67

b. How many people were traveling **only** to another country? 19

## 25. Mathematical Applications

**E-1** A carpenter wants to build a table and plans to put 12 square tiles on the rectangular table top.

Show a design the carpenter could use given the following:

- There are a total of 12 square tiles that are 6 inches in width.
- The design can be either 3 rows of 4 tiles **or** 2 rows of 6 tiles.
- There is a 1-inch space between all tiles.
- There is a 2-inch border around the entire tabletop.

Find the total **length** of the table top. Find the total **width** of the table top. Label the total **length** and the total **width** of the table top in inches.