

About Our Samples

The Texas STAAR Tutorials by TripleNterprises Publishing (TEP) are developed for teachers (or any tutoring instructor) and students to use in order to prepare for the STAAR exam. These materials are designed to work together. All teacher manuals contain lesson plans, answer keys and other information specific to the grade and subject being taught, while the student workbook contains all the practice tests and exercised that go with a specific lesson.

Our tutorials cover all of the standards and TEKS assessed on the STAAR exam.

For purposes of illustrating how our materials work together, this sample contains the lesson plan and transparencies for a given standard/TEK, followed by the student material associated with that lesson.

Products may be purchased in single book quantities, multiple book quantities with volume discounts or in full classroom kits, our best value.

If you have a class size that does not fit our class kit, give us a call and we will work with you to build a kit to fit your class.

Products can be ordered via our website at www.txstaar.com, via faxed purchase order at 866-213-2483, or by calling our offices at 210-481-1324.

Student workbooks **\$15.95 (discount breaks at 10 and 20 books)**

Teacher manuals **\$25.95 (free with class kits)**

Class kits **\$299.00**

- 20 Student Books
- 1 Teacher Manual
- Scripted Lesson Plans
- Answer Key

Practice Tests **\$229.00**

Each Test Pack contains tests for 20 students. All Reporting Categories and TEKS are included in the tests.

See our website (www.txstaar.com) for freight rates.

Texas STAAR Exam -- Lesson 15, 3.6(C)

Reporting Category 2: Patterns, Relationships, and Algebraic Reasoning

The student will demonstrate an understanding of patterns, relationships, and algebraic reasoning.

(3.6) Patterns, relationships, and algebraic thinking.

The student uses patterns to solve problems. The student is expected to

- (A) identify patterns in related multiplication and division sentences (fact families) such as $2 \times 3 = 6$, $3 \times 2 = 6$, $6 \div 2 = 3$, $6 \div 3 = 2$. **Supporting Standard**
-

Say: In this lesson, we are going to learn about fact families. A fact family is a group of related number sentences. The number sentences in a fact family all use the same numbers.

Put Lesson Slide #1 on the white board / overhead

Say: Let's look at an example. $2 \times 3 = 6$ and $3 \times 2 = 6$ have the same answer. The order in which you multiply the two numbers – 3 and 2 does not change the answer.

What is the division fact family for the numbers 3, 2 and 6? $6 \div 3 = 2$. Another way of writing this is $6 \div 2 = 3$. All 3 numbers stay the same. Since all 3 numbers are the same for both multiplication and division, then these are in the same fact family.

Put Lesson Slide #2 on the white board / overhead

Say: Let's look at another example. Is $4 \times 6 = 24$ and $6 \times 4 = 24$ in the same multiplication fact family? Let's see.

The order in which you multiply the two numbers – 4 and 6 does not change the answer, so yes they are in the same multiplication fact family. What about on the division side? Are both of these in the same fact family? Yes, since they have the same 3 numbers, then they are in the division fact family. And since all 3 numbers are the same for both multiplication and division, then these are in the same fact family.

Put Lesson Slide #3 on the white board / overhead

Say: Addition and Subtraction are in a fact family together, just like multiplication and division. But they are not in the SAME fact family as multiplication and division. These are 2 SEPARATE fact families. Let's see why.

Say: Do STAAR Practice 3.6(C) (1) & (2), Logic and Manipulative Exercise 3.6(C)

Lesson 15: Lesson Slide #1

Multiplication and Division Fact Families

Let's look at the fact families below.

These are in the same multiplication and division fact family:

Multiplication Facts	Division Facts
$2 \times 3 = 6$	$6 \div 3 = 2$
$3 \times 2 = 6$	$6 \div 2 = 3$

These are in the same multiplication and division fact family:

Multiplication Facts	Division Facts
$4 \times 6 = 24$	$24 \div 6 = 4$
$6 \times 4 = 24$	$24 \div 4 = 6$

Lesson 15: Lesson Slide #2

Addition and Subtraction Fact Families

Addition and Subtraction are in a fact family together. They are in the Addition and Subtraction Fact Family.

Addition Facts	Subtraction Facts
$4 + 6 = 10$	$10 - 6 = 4$
$6 + 4 = 10$	$10 - 4 = 6$

BUT, Addition and Subtraction are NOT in same fact family as Multiplication and Division.

These are 2 separate fact families.

Addition and Subtraction Fact Family	Multiplication and Division Fact Family
$4 + 6 = 10$ And $4 + 6 \neq 24$	$4 \times 6 \neq 10$ And $4 \times 6 = 24$

We can see by the examples above that addition and subtraction are not in the same fact families as multiplication and division.

Lesson 15: Lesson Slide #3

Addition, Subtraction, Multiplication and Division Fact Families

Addition and Subtraction fact families *use the same three numbers* in both families.

However, *the same three numbers are not used* in the Multiplication and Division fact families.

Therefore, addition and subtraction families are different from multiplication and division fact families.

Look at the examples below for a better understanding.

Addition Facts	Subtraction Facts
$4 + 6 = 10$	$10 - 6 = 4$
$6 + 4 = 10$	$10 - 4 = 6$

Multiplication Facts	Division Facts
$4 \times 6 = 24$	$24 \div 6 = 4$
$6 \times 4 = 24$	$24 \div 4 = 6$

STAAR Practice 3.6(C)(1)

1 Which number sentence is in the same fact family as $8 \times 7 = 56$?

- A** $56 - 7 = 49$
- B** $8 + 7 = 15$
- C** $56 \div 8 = 7$
- D** $8 - 7 = 1$

2 Which number sentence is in the same fact family as $6 \times 4 = 24$?

- A** $24 - 6 = 18$
- B** $4 + 6 = 10$
- C** $24 \div 4 = 6$
- D** $6 \times 5 = 30$

3 Which number sentence is in the same fact family as $9 \times 3 = 27$?

- A** $27 - 9 = 18$
- B** $9 + 3 = 12$
- C** $27 \times 3 = 81$
- D** $27 \div 3 = 9$

4 Which number sentence is in the same fact family as $4 \times 5 = 20$?

- A** $20 \div 5 = 4$
- B** $20 - 5 = 15$
- C** $5 + 4 = 9$
- D** $4 \times 20 = 80$

5 Which number sentence is in the same fact family as $4 \times 8 = 32$?

- A** $32 - 8 = 24$
- B** $4 + 8 = 12$
- C** $24 \div 8 = 3$
- D** $32 \div 4 = 8$

6 Which number sentence is in the same fact family as $7 \times 9 = 63$?

- A** $9 - 7 = 2$
- B** $63 \div 9 = 7$
- C** $63 - 9 = 54$
- D** $9 \times 8 = 72$

7 Which number sentence is in the same fact family as $2 \times 5 = 10$?

- A** $10 - 5 = 5$
- B** $5 - 2 = 3$
- C** $5 \times 10 = 50$
- D** $10 \div 2 = 5$

8 Which number sentence is in the same fact family as $3 \times 6 = 18$?

- A** $18 \div 6 = 3$
- B** $18 - 6 = 12$
- C** $6 + 3 = 9$
- D** $3 \times 18 = 51$

STAAR Practice 3.6(C)(2)

- 1** Which number sentence is in the same family of facts as $13 \times 3 = 39$?
- A** $13 + 3 = 16$
 - B** $39 \div 3 = 13$
 - C** $13 + 13 = 26$
 - D** $39 - 3 = 36$
- 2** Which number sentence is in the same family of facts as $60 + 3 = 63$?
- A** $60 \div 3 = 20$
 - B** $60 \times 3 = 180$
 - C** $63 + 3 = 66$
 - D** $63 - 3 = 60$
- 3** Which number sentence is in the same family of facts as $25 \times 5 = 125$?
- A** $25 + 5 = 30$
 - B** $125 \div 5 = 25$
 - C** $25 - 5 = 20$
 - D** $125 \times 5 = 625$
- 4** Which number sentence is in the same family of facts as $56 \div 7 = 8$?
- A** $8 \times 7 = 56$
 - B** $7 + 8 = 15$
 - C** $56 - 7 = 49$
 - D** $14 \div 7 = 2$
- 5** Which number sentence is in the same family of facts as $20 \times 5 = 100$?
- A** $20 - 5 = 15$
 - B** $100 \times 5 = 500$
 - C** $100 \div 20 = 5$
 - D** $20 + 5 = 25$
- 6** Which number sentence is in the same family of facts as $12 \times 6 = 72$?
- A** $12 + 6 = 18$
 - B** $72 \div 6 = 12$
 - C** $30 + 16 = 46$
 - D** $16 - 4 = 12$
- 7** Which number sentence is in the same family of facts as $50 - 10 = 40$?
- A** $50 \div 10 = 5$
 - B** $40 + 10 = 50$
 - C** $10 \times 4 = 40$
 - D** $40 - 10 = 30$
- 8** Which number sentence is in the same family of facts as $100 \div 5 = 20$?
- A** $20 \div 5 = 4$
 - B** $100 + 20 = 120$
 - C** $100 - 5 = 95$
 - D** $20 \times 5 = 100$

"All in the Family"

Directions: Match the multiplication problem with its corresponding division problem. Remember to keep it in the same fact family!

Example: $3 \times 4 = 12$ is in the same family as $12 \div 3 = 4$

1. $2 \times 3 = 6$

2. $4 \times 7 = 28$

3. $6 \times 5 = 30$

4. $9 \times 7 = 63$

5. $5 \times 4 = 20$

6. $3 \times 7 = 21$

7. $4 \times 2 = 8$

8. $9 \times 6 = 54$

9. $7 \times 7 = 49$

10. $2 \times 8 = 16$

11. $5 \times 8 = 40$

12. $6 \times 4 = 24$

A. $49 \div 7 = 7$

B. $21 \div 3 = 7$

C. $40 \div 8 = 5$

D. $54 \div 6 = 9$

E. $30 \div 6 = 5$

F. $24 \div 6 = 4$

G. $6 \div 3 = 2$

H. $20 \div 5 = 4$

I. $16 \div 2 = 8$

J. $28 \div 4 = 7$

K. $63 \div 9 = 7$

L. $8 \div 2 = 4$

"Family Ties"

Directions: Roll the dice for each problem and fill in the number you roll. Solve the problems once you have filled in all the spaces. Then create a division sentence using those same numbers for each problem. Remember to keep it in the same fact family!

Example: _____ x 4: If you roll a 3, the problem is $3 \times 4 = 12$.
Division Sentence in the same fact family: $12 \div 3 = 4$

1. _____ x 1 =

2. _____ x 2 =

3. _____ x 3 =

4. _____ x 4 =

5. _____ x 5 =

6. _____ x 6 =

7. _____ x 7 =

8. _____ x 8 =

9. _____ x 9 =

10. _____ x 10 =

Texas STAAR Exam -- Lesson 27, 3.13(A)

Reporting Category 5: Probability and Statistics

The student will demonstrate an understanding of probability and statistics.

(3.13) Probability and statistics.

The student solves problems by collecting, organizing, displaying, and interpreting sets of data. The student is expected to

- (A) collect, organize, record, and display data in pictographs and bar graphs where each picture or cell might represent more than one piece of data; **Readiness Standard**
-

Say: In this lesson, we are going to study different types of graphs and tables and how to read them. Graphs and tables are useful because they help us organize information so that it is easier to read and understand.

Put Lesson Slide #1 on the white board / overhead.

Note: *Cover the table until after you have talked about the data. Once you reveal the table, explain how it is designed and why.*

Say: A table is a good way that we can organize data into a useful form. Let's see if we can create a table from this information. A good way to build a table is to use tally marks. So, let's try it on this one. Here is the information we were given. It is a list of the color of shirts certain students are wearing. We need to find out how many students are wearing a blue shirt. So, let's make a chart using what the data tells us. The first one says that Madeline is wearing a blue shirt, so let's put a tally mark next to blue shirt. The next one says Barrett is wearing a red shirt, so let's put a tally mark next to red shirt on our chart. See if you can do the rest on your own.

Have the students complete the chart and review the answer.

Say: How many students are wearing blue shirts? 4. How many students are wearing red shirts? 2. How many students are wearing a purple shirt? 1.

Say: Let's try another one.

Put Lesson Slide #2 on the white board / overhead and have the students complete the table. Then review the answers

Say: How many students are wearing jeans? 3. How many students are wearing a skirt? 2. How many students are wearing shorts? 2.

Lesson 27 *continued*

Put Lesson Slide #3 on the white board / overhead

Say: Now, we are going to talk about graphs. Can anyone tell me what type of graph this is? This is a bar graph. A bar graph uses bars to show data. The title of the bar graph tells you what information is being graphed. The labels describe the specific data that is being graphed. So what information does this bar graph explain? The favorite pizza of the students in Mr. Thomas' class.

Have the students answer the 3 questions and review the answers

Say: Let's see how you did.
#1 30 students – B
#2 35 students – C
#3 85 students – A

Say: How many people got the right answer for #3. That's great. On that question, you have to add the number of students who chose pepperoni or cheese. Remember to watch for key words like "and" or "or" that tell you to add. Now let's talk about another type of graph

Put Lesson Slide #4 on the white board / overhead

Read Lesson Slide 4

Say: Do STAAR Practices 3.13(A) (1) and (2), Logic and Manipulative Exercise 3.13(A)

Lesson 27: Lesson Slide #1

Madeline is wearing a blue shirt.
Barrett is wearing a red shirt.
Elise is wearing a purple shirt.
Christine is wearing a blue shirt.
Alex is wearing a red shirt.
Chase is wearing a blue shirt.
Landon is wearing a blue shirt.

How many students have blue shirts?

Shirt Color	Number of Students
Blue	
Red	
Purple	

of students wearing blue shirts: _____

Lesson 27: Lesson Slide #2

Madeline is wearing jeans.
Barrett is wearing jeans.
Elise is wearing a skirt.
Christine is wearing a skirt.
Alex is wearing shorts.
Chase is wearing jeans.
Landon is wearing shorts.

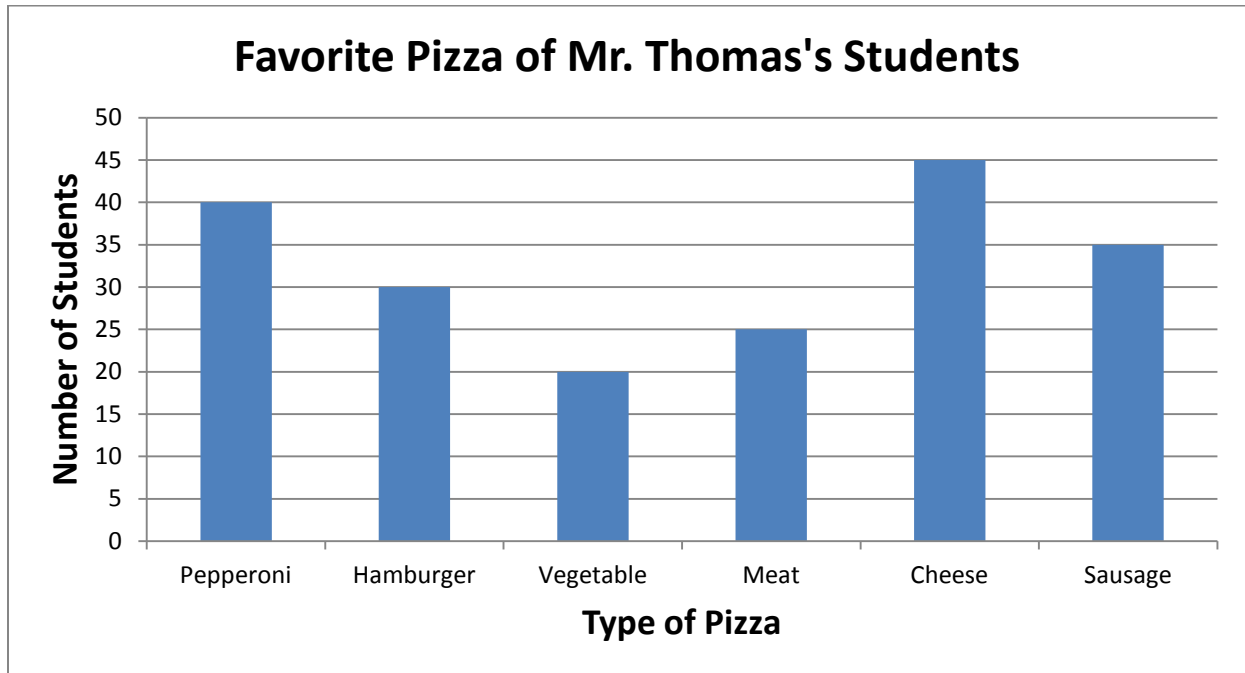
How many students are wearing jeans?

Clothes Type	Number of Students (in Tally marks)	Number of Students (in Numbers)
Jeans		
Skirt		
Shorts		

of students wearing jeans:

Lesson 27: Lesson Slide #3

The graph shows the favorite pizza of the students in Mr. Thomas' class:

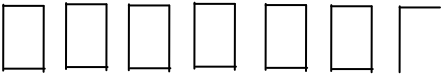
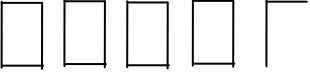
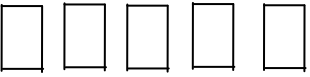
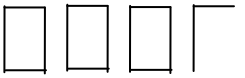
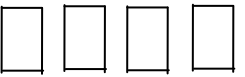


1. How many students chose Hamburger as their favorite pizza?
 - A. 25
 - B. 30
 - C. 35
 - D. 40
2. How many students chose Sausage as their favorite pizza?
 - A. 25
 - B. 30
 - C. 35
 - D. 40
3. How many students chose Pepperoni or Cheese as their favorite pizza?
 - A. 85
 - B. 80
 - C. 95
 - D. 70

Lesson 27: Lesson Slide #4

Example 1:

The graph below show the number of sports trading cards purchased by 5 students last month.

Bill	
Cathy	
Donald	
Edward	
Fannie	

Each  = 10 cards purchased, Each  = 5 cards purchased

How many cards did...

Bill purchase? _____
Cathy purchase? _____
Donald purchase? _____
Edward purchase? _____
Fannie purchase? _____

Solution Strategy:

It is important that you understand the value of each card on the graph. Remember that a full card represents 10 cards purchased and a half card represents 5 cards purchased.

The graph shows Bill has 6 full cards and one half card. We can determine how many cards Bill purchased using $(6 \times 10) + 5$. Bill purchased 65 cards.

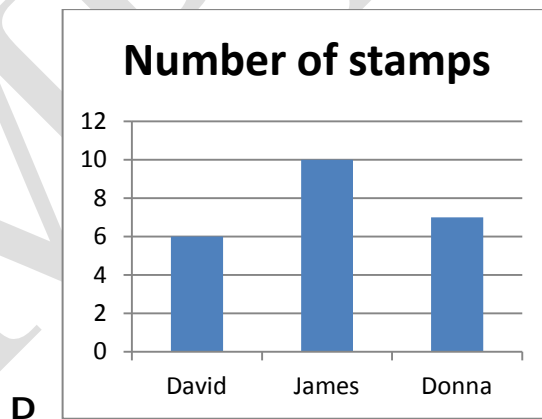
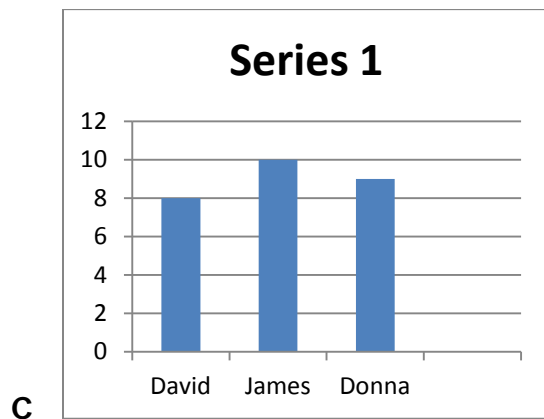
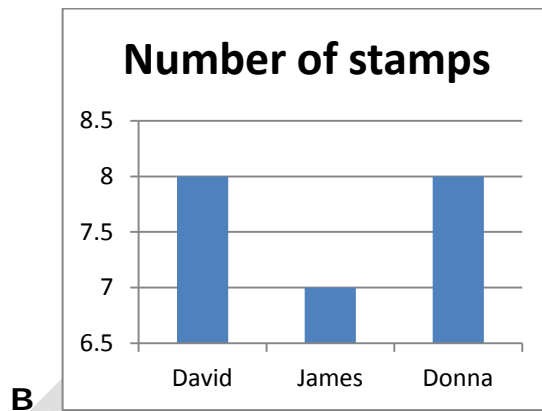
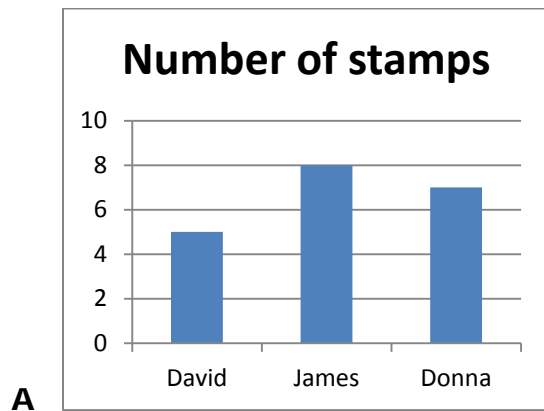
Let's go ahead and fill in the rest of the answers using the same strategy we used for Bill.

STAAR Practice 3.13(A)(1)

- 1 The chart below shows the number of stamps collected by 3 students for history class:

Student	David	James	Donna
Number of Stamps	8	10	9

Which graph matches the facts given in the chart?

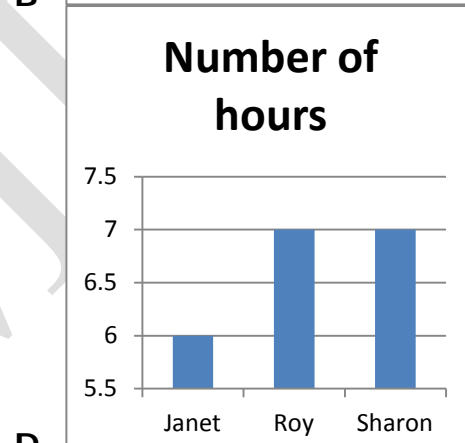
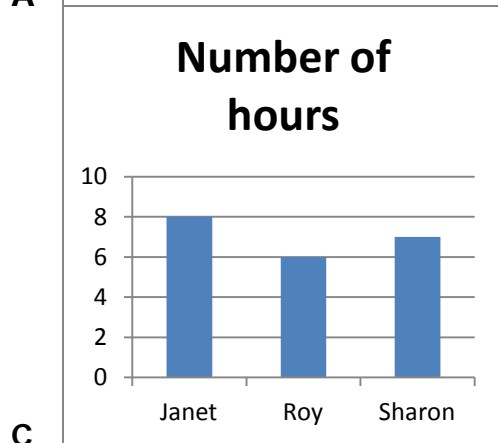
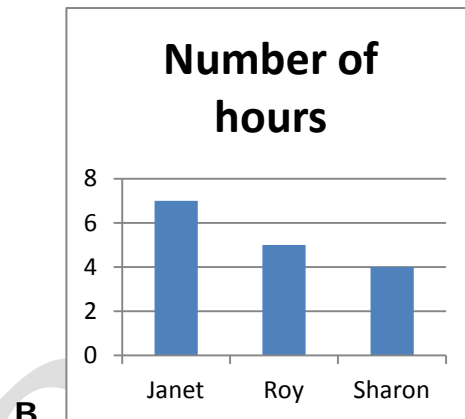
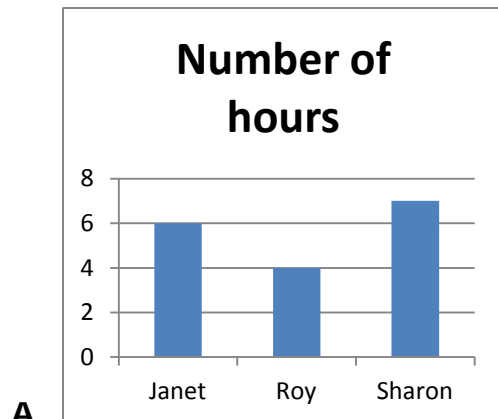


STAAR Practice 3.13(A)(1) *continued*

2 The chart below shows the number of hours 3 students read each week:

Student	Janet	Roy	Sharon
Number of hours	6	4	7

Which graph matches the facts given in the chart?

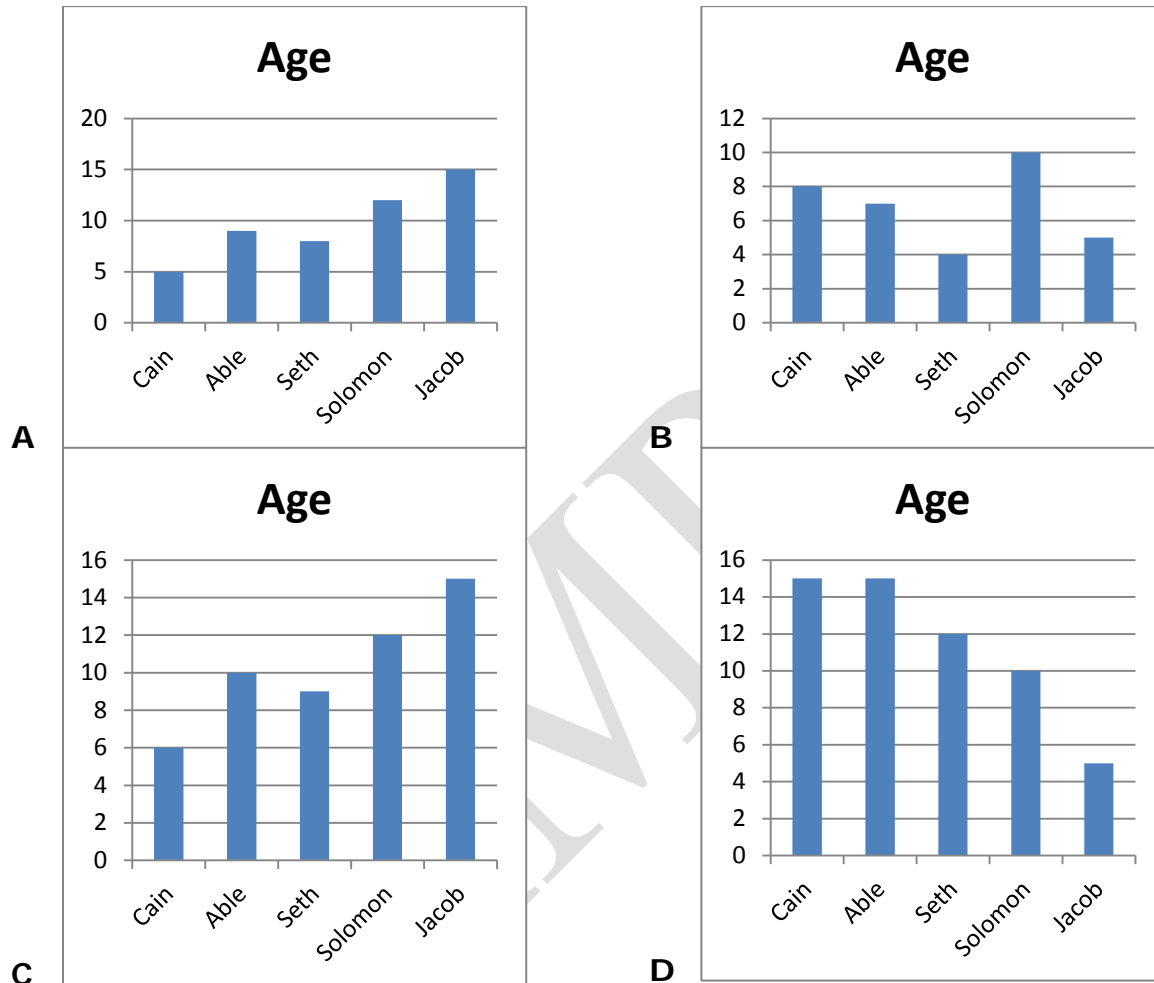


STAAR Practice 3.13(A)(1) *continued*

3 The chart shows the ages of 5 kids in a family:

Name	Cain	Able	Seth	Solomon	Jacob
Age	15	15	12	10	5

Which graph matches the facts given in the chart?

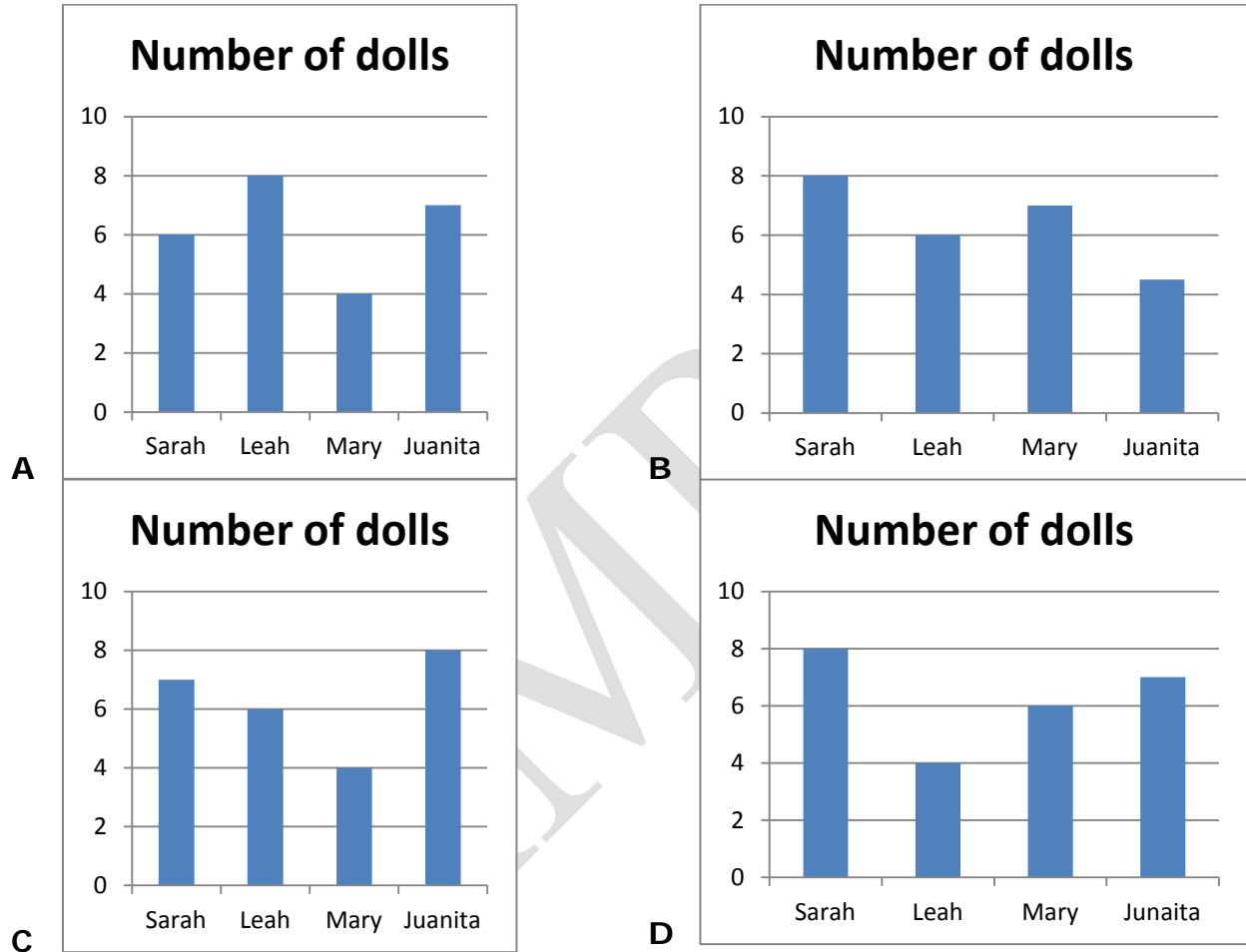


STAAR Practice 3.13(A)(1) *continued*

4 The chart shows the rare doll collection of four girls:

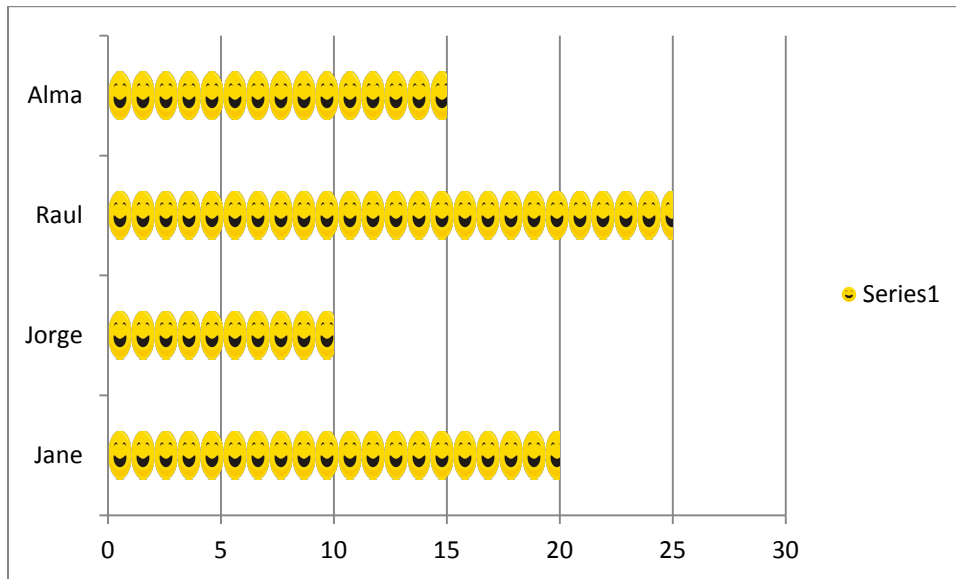
Name	Sarah	Leah	Mary	Juanita
Number of dolls	8	4	6	7

Which graph matches the facts given in the chart?



STAAR Practice 3.13(A)(1) continued

The chart below shows the number of citizenship awards received by each third grader during "Citizenship Week". Use this chart to answer questions 5 - 8.



5 Which student has the fewest awards?

- A** Alma
- B** Raul
- C** Jorge
- D** Jane

6 Which student has the most awards?

- A** Alma
- B** Raul
- C** Jorge
- D** Jane

7 How many awards did Jorge receive?

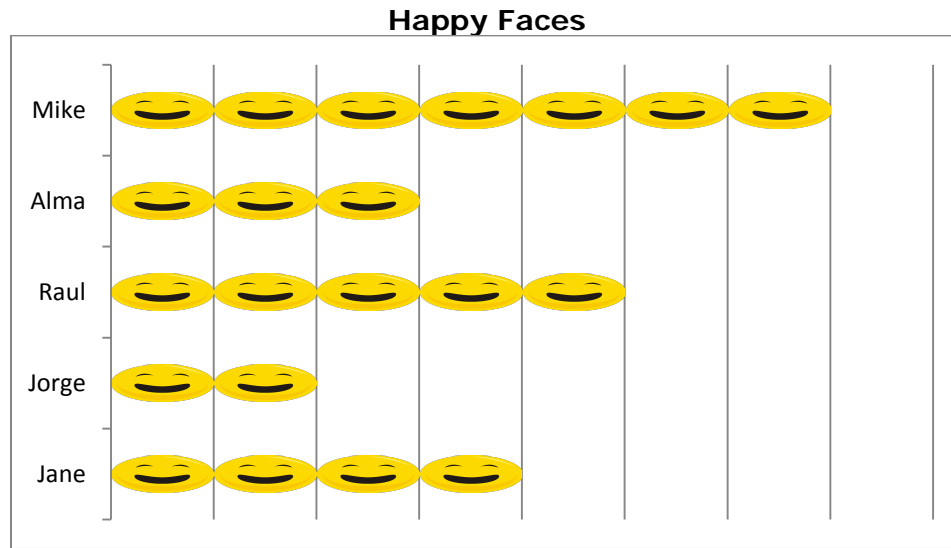
- A** 8
- B** 9
- C** 10
- D** 11


8 How many awards did Jane receive?

- A** 20
- B** 15
- C** 10
- D** 5

STAAR Practice 3.13(A)(2)

The chart below shows the number of happy faces received by five students last month for Good Citizenship. **Use this chart to answer questions 1 - 8.**



Each  equals 5 happy faces received

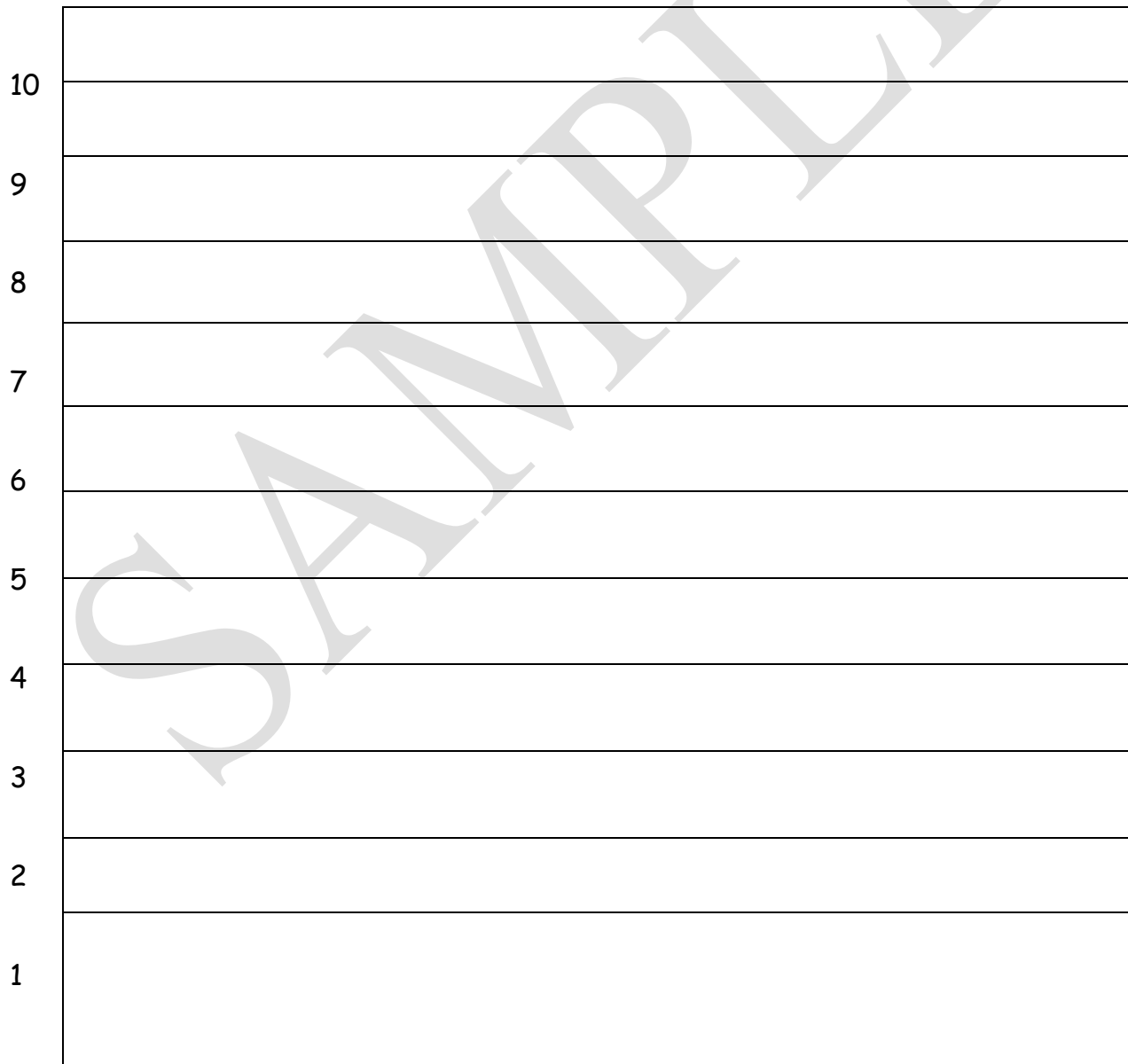
- How many more happy faces did Mike have than Jane?
A 10 **B** 15 **C** 20 **D** 30
- Which two students combined had a total of 40 happy faces?
A Jane and Raul
B Jorge and Mike
C Raul and Alma
D Jane and Alma
- How many happy faces did Raul have?
A 14 **B** 16 **C** 25 **D** 50
- Which two students received the most happy faces?
A Jane and Raul
B Raul and Mike
C Jorge and Alma
D Jane and Alma
- Which two students received the fewest happy faces?
A Jane and Raul
B Raul and Mike
C Jorge and Alma
D Jane and Alma
- What is the total number of happy faces received by all five of the students?
A 105 **B** 90 **C** 75 **D** 65
- How many happy faces did Jane and Alma have together?
A 25 **B** 30 **C** 35 **D** 45
- Which student received the fewest happy faces?
A Jorge
B Raul
C Mike
D Jane

Logic Exercise 3.13(A)

"Graph It!"

The chart shows the number of pictures of birds taken by three students during a nature hike. Use the information in the chart to make a graph of the students' results.

Student	Suzy	James	David
Number of Pictures	8	9	7



Manipulative Exercise 3.13(A)

Graph This!

Directions: Shuffle the deck of cards. Count out 20 cards. Figure out how many of each suite - Hearts, Spade, Diamond or Club you have. Make a bar graph of the results.

SAMPLE