TABE Math-E

PAXEN

Unit-5 Measurement and Data
Lesson 41
BAR GRAPHS
(Charts)

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Some graphics may not have copied well during the scan process.

Math-E - Lesson 41 – Bar Graph Charts

2.MD.10 – Low, 3.MD.3 – Low

Picture graphs and bar graphs are visual representations of mathematical data. You can use graphs to organize and analyze information.

Example A book club asked members how many books they read last year. Who read the most books? Who read the fewest? What is the difference between the highest and lowest number of books?

Books per Year

Farrah	📚 📚 📚 📚 📚
Jane	📚 📚 📚
Jacques	📚 📚 📚 📚 📚 📚 📚
Damien	📚 📚 📚 📚

Key: Each 📚 = 2 books

1) Find who read the most books and how many books he or she read. Jacques has the most pictures of books, 8. Each picture is equivalent to 2 books read. Jacques read $8 \times 2 = 16$ books.

2) Find who read the fewest books and how many. Jane has the fewest pictures of books, 4. Each picture is equivalent to 2 books read. Jane read $4 \times 2 = 8$ books.

3) Subtract to find the difference: $16 - 8 = 8$.

So, Jacques read the most books. Jane read the fewest. Jacques read 8 more books than Jane.
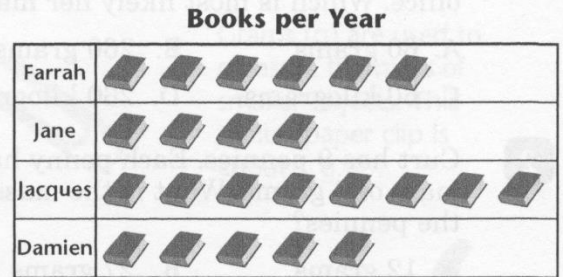
Example A survey asked people to identify their favorite color. How many people chose blue or red?

Favorite Color

1) Find how many people chose red. The bar representing red has a height of 3 on the axis, so 3 people chose red.
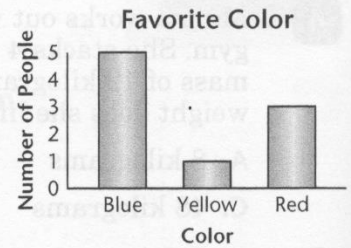
2) Find how many people chose blue. The bar representing blue has a height of 5 on the axis, so 5 people chose blue.

3) Add to find the total: $3 + 5 = 8$.

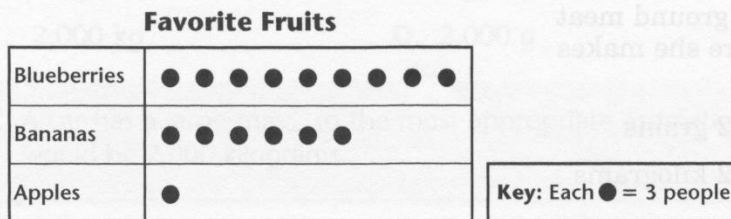So, 8 people chose blue or red as their favorite color.

Test Example

1. A survey asked people to identify their favorite fruit. How many fewer people prefer apples than bananas?

Favorite Fruits

Blueberries	● ● ● ● ● ● ● ● ● ●
Bananas	● ● ● ● ● ●
Apples	●

Key: Each ● = 3 people

A. 21

B. 15

C. 7

D. 5

Hint

The key of a graph will tell you what each picture represents.

1. **B** Each picture on the graph represents 3 people. There are 6 circles for bananas and 1 circle for apples; $6 - 1 = 5$, $5 \times 3 = 15$.
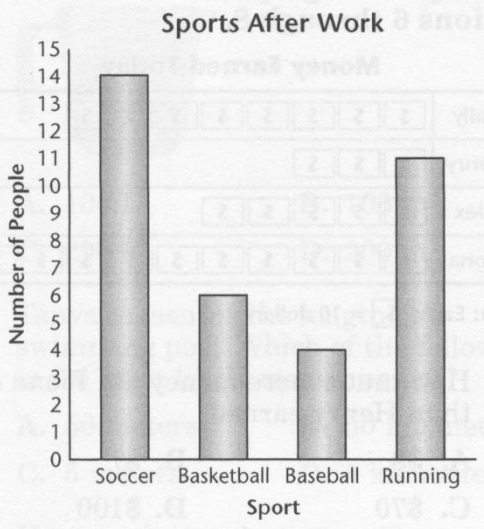
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Read each question. Select the correct answer.

Use the bar graph to answer questions 1 through 3.

Sports After Work

Number of People (y-axis: 0–15)
Sport (x-axis): Soccer, Basketball, Baseball, Running

1. Which sport do the fewest number of people play after work?

    A. Running

    B. Baseball

    C. Basketball

    D. Soccer

2. How many more people play soccer than run after work?

    A. 3 people

    B. 11 people

    C. 14 people

    D. 25 people

3. Which of the following statements is true?

    A. Fewer people like running than basketball and baseball combined.

    B. Running is the most popular sport after work.

    C. Fewer people like soccer than running and basketball combined.

    D. More people play soccer than every other sport combined.

Use the picture graph to answer questions 4 through 6.

Lunch Beverages Consumed in the Cafe

Milk	
Juice	
Water	
Coffee	
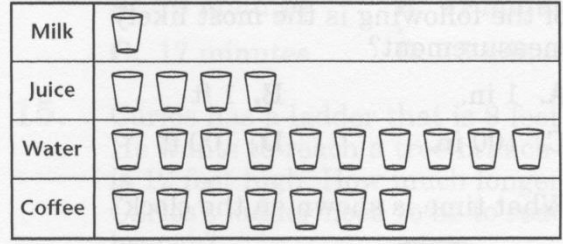
Key: Each = 5 glasses

4. How many glasses of milk or juice did people have with lunch?

    A. 4

    B. 5

    C. 20

    D. 25

5. How many fewer glasses of milk than coffee did people have with lunch?

    A. 6

    B. 8

    C. 30

    D. 40

6. How many fewer glasses of juice than water did people have with lunch?

    A. 10

    B. 25

    C. 30

    D. 45

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Lesson 41 | **Picture Graphs and Bar Graphs**

1. B. Baseball has the shortest bar.

2. A. $14 - 11 = 3$. 3 more people play soccer than run after work.

3. C. 14 people play soccer, 11 people run, and 6 people play basketball; $(11 + 6) = 17$, $14 < 17$.

4. D. There are 4 glasses for juice and 1 glass for milk. Each glass represents 5 drinks. $4 + 1 = 5$, $5 \times 5 = 25$.

5. C. There are 7 glasses for coffee and 1 glass for milk. Each glass represents 5 drinks. $7 - 1 = 6$, $6 \times 5 = 30$.

6. C. There are 4 glasses for juice and 10 glasses for water. Each glass represents 5 drinks. $10 - 4 = 6$, $6 \times 5 = 30$.
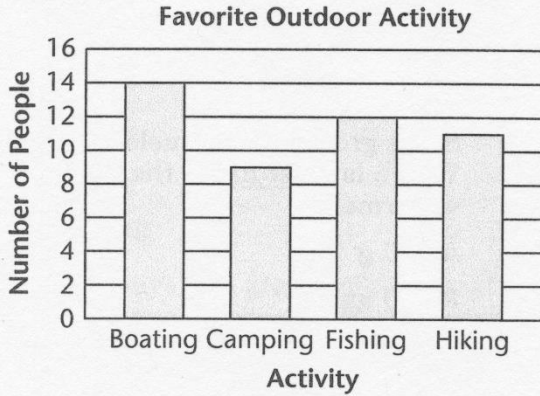
Math-E - Practice 41 – Bar Graph Charts

2.MD.10 – Low, 3.MD.3 – Low

Use the bar graph to answer questions 1 through 4.

Favorite Outdoor Activity

Use the picture graph to answer questions 5 through 8.

Preferred Method of Communication for People 65 Years Old and Older

Key: Each ⬭ = 7 people

1 What is the most popular outdoor activity?

A. Boating

B. Camping

C. Fishing

D. Hiking

2 What is the least popular outdoor activity?

A. Hiking

B. Fishing

C. Camping

D. Boating

3 How many more people like to go boating than hiking?

A. 25 people

B. 14 people

C. 4 people

D. 3 people

4 How many people like to go camping or fishing?
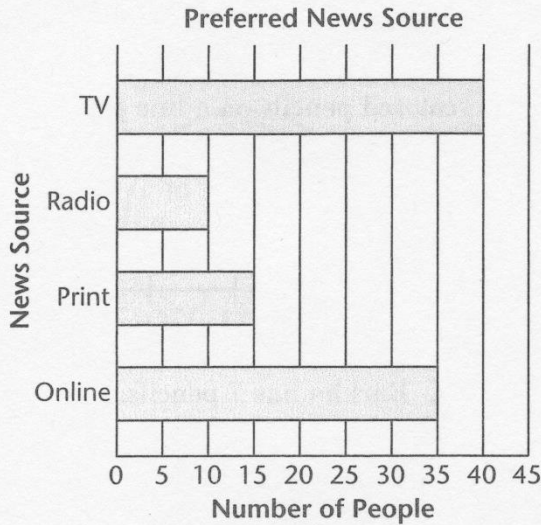
A. 9 people

B. 12 people

C. 21 people

D. 26 people

5 Which two statements are true?

A. Email is more preferred than mail, but less preferred than phone.

B. Email is less preferred than mail, but more preferred than phone.

C. The total number of people who prefer to communicate by mail and text is 35.

D. Fewer people prefer to communicate by text and email combined than by mail.

E. More people prefer to communicate by phone than by email and text combined.

F. The total number of people who prefer to communicate by phone and mail is 91.

6 How many fewer people prefer to communicate by text than by email?

A. 3 people   B. 13 people

C. 21 people   D. 91 people

7 How many more people prefer to communicate by mail than by text?

A. 2 people   B. 4 people

C. 7 people   D. 14 people

8 How many people prefer to communicate by mail or email?

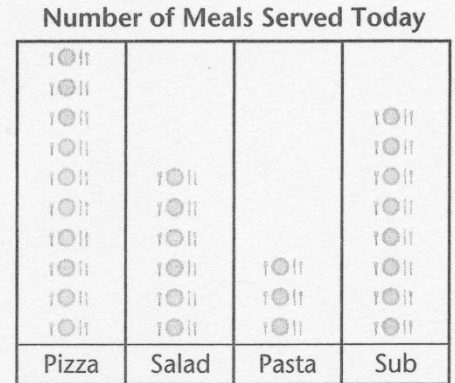A. 70 people   B. 63 people

C. 35 people   D. 9 people

5

Math-E - Practice 41 – Bar Graph Charts

Use the bar graph to answer questions 9 through 13.

Preferred News Source

Use the picture graph to answer questions 14 through 18.

Number of Meals Served Today

Key: Each 🙂 = 5 meals

9 Which news source is preferred by 15 people?

A. Online   B. Print

C. Radio   D. TV

10 Which pair of news sources has a difference of 20 people between them?

A. TV and Print

B. TV and Radio

C. Online and Radio

D. Online and Print

11 What is the second-most preferred news source?

A. TV   B. Radio

C. Print   D. Online

12 What is the difference between the number of people who prefer TV and radio sources?

A. 15 people   B. 20 people

C. 25 people   D. 30 people

13 How many people were questioned about their preferred news source?

A. 100 people   B. 90 people

C. 85 people   D. 75 people

14 How many more salads were served than pasta?

A. 3 salads   B. 6 salads

C. 15 salads   D. 20 salads

15 How many pizzas and subs were served?

A. 18 pizzas and subs

B. 40 pizzas and subs

C. 50 pizzas and subs

D. 90 pizzas and subs

16 How many more pizzas were served than salad and pasta combined?

A. 1 pizza   B. 5 pizzas

C. 9 pizzas   D. 10 pizzas

17 How many fewer pasta meals were served than subs?

A. 5 pasta meals

B. 8 pasta meals

C. 15 pasta meals

D. 25 pasta meals

18 Which pair of meals served has a difference of 10 meals between them?

A. subs and salads

B. pizza and salads

C. salads and pasta

D. subs and pasta

Math-E - Practice 41 – Bar Graph Charts

Practice 41 | **Picture Graphs and Bar Graphs** |

pp. 22–23   (2.MD.10; 3.MD.3)

1. A. Boating has the longest bar.

2. C. Camping has the shortest bar.

3. D. $14 - 11 = 3$; Three more people like boating than hiking.

4. C. $9 + 12 = 21$; Twenty-one people like to go camping or fishing.

5. A, E. There are 5 speech bubbles for email and 4 speech bubbles for mail. Each speech bubble represents 7 people. $5 - 4 = 1$, $1 \times 7 = 7$; Seven more people prefer email than mail. There are 8 speech bubbles for phone. $8 - 5 = 3$, $3 \times 7 = 21$; Twenty-one fewer people prefer email than phone. There are $8 \times 7 = 56$ people who prefer phone. There are $5 \times 7 = 35$ people who prefer email and $2 \times 7 = 14$ people who prefer text; $56 > (35 + 14)$.

6. C. There are 5 speech bubbles for email and 2 speech bubbles for text. Each speech bubble represents 7 people. $5 - 2 = 3$, $3 \times 7 = 21$; Twenty-one fewer people prefer to communicate by text than by email.

7. D. There are 4 speech bubbles for mail and 2 speech bubbles for text. Each speech bubble represents 7 people. $4 - 2 = 2$, $2 \times 7 = 14$; Fourteen more people prefer to communicate by mail than by text.

8. B. There are 4 speech bubbles for mail and 5 speech bubbles for email. Each speech bubble represents 7 people. $4 + 5 = 9$, $9 \times 7 = 63$; Sixty-three people prefer to communicate by mail or email.

9. B. The news source that has the bar that stops on 15 is print.

10. D. Thirty-five people prefer online news sources. Fifteen people prefer print news sources; $35 - 15 = 20$.

11. D. Online has the second longest bar.

12. D. $40 - 10 = 30$; Thirty more people prefer TV news sources than radio new sources.

13. A. $40 + 10 + 15 + 35 = 100$; One hundred people were questioned about their preferred news source.

14. C. There are 6 place settings for salads and 3 place settings for pasta. Each place setting represents 5 meals. $6 - 3 = 3$, $3 \times 5 = 15$.

15. D. There are 10 place settings for pizzas and 8 place settings for subs. Each place setting represents 5 meals. $10 + 8 = 18$, $18 \times 5 = 90$.

16. B. There are 10 place settings for pizzas, 6 place settings for salads, and 3 place settings for pasta. Each place setting represents 5 meals. $10 - (6 + 3) = 1$, $1 \times 5 = 5$.

17. D. There are 3 place settings for pasta and 8 place settings for subs. Each place setting represents 5 meals. $8 - 3 = 5$, $5 \times 5 = 25$.

18. A. There are 8 place settings for subs and 6 place settings for salads. Each place setting represents 5 meals. $8 - 6 = 2$, $2 \times 5 = 10$.