1. This table shows the favorite colors of the students in Miss Jackson’s class.

<table>
<thead>
<tr>
<th>Colors</th>
<th>Number of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red</td>
<td>8</td>
</tr>
<tr>
<td>Green</td>
<td>7</td>
</tr>
<tr>
<td>Purple</td>
<td>2</td>
</tr>
<tr>
<td>Yellow</td>
<td>4</td>
</tr>
<tr>
<td>Blue</td>
<td>9</td>
</tr>
</tbody>
</table>

Which graph displays the data from the table?

A

B

C

D
2. Miss Smith’s class decided to graph how often the school served pizza for lunch during the school year. The graph showed more times in May than any other month. It showed none at all in December. It also showed the school served pizza the same number of times in September and March. Which graph shows all of those facts?
3. The students in Mrs. Lane’s class made a graph of their favorite sports.

<table>
<thead>
<tr>
<th>Students’ Favorite Sport</th>
</tr>
</thead>
<tbody>
<tr>
<td>football</td>
</tr>
<tr>
<td>baseball</td>
</tr>
<tr>
<td>basketball</td>
</tr>
<tr>
<td>soccer</td>
</tr>
</tbody>
</table>

Which sport did more of the students like best?

A  football
B  baseball
C  basketball
D  soccer
4. The weathermen at the TV station made a graph of the high temperatures for the month of July. What is the mode for this data?

**Temperatures in July**

<table>
<thead>
<tr>
<th>Number of Times a Temperature was Reported</th>
<th>85°</th>
<th>86°</th>
<th>87°</th>
<th>88°</th>
<th>89°</th>
<th>90°</th>
<th>91°</th>
<th>92°</th>
<th>93°</th>
<th>94°</th>
<th>95°</th>
<th>96°</th>
<th>97°</th>
<th>98°</th>
<th>99°</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
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<tr>
<td>A 92°</td>
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<td></td>
</tr>
<tr>
<td>B 93°</td>
<td></td>
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<td></td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>C 94°</td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>D 95°</td>
<td></td>
<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
5. Rajah made this pictograph to show how many points he scored in each basketball game.

Rajah’s Points

<table>
<thead>
<tr>
<th>Game 1</th>
<th>Game 2</th>
<th>Game 3</th>
<th>Game 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Diagram of Game 1]</td>
<td>![Diagram of Game 2]</td>
<td>![Diagram of Game 3]</td>
<td>![Diagram of Game 4]</td>
</tr>
</tbody>
</table>

Key Each 🏀 = __?___ points

If Rajah scored 30 points in Game 1, 15 points in Game 2, and 18 points in Game 3, how many points does each basketball on the graph represent?

A 2  
B 3  
C 4  
D 5
6. This pictograph shows the number of runs scored in a softball game. The team that scored the most runs won the game.

<table>
<thead>
<tr>
<th>Runs Scored</th>
</tr>
</thead>
<tbody>
<tr>
<td>Team 1</td>
</tr>
<tr>
<td>Team 2</td>
</tr>
</tbody>
</table>

\( \odot = 2 \text{ runs} \)

What information is given by the graph?

A. Team 2 lost to Team 1 by more than 5 runs.
B. Team 1 lost to Team 2 by more than 5 runs.
C. Team 2 lost to Team 1 by less than 5 runs.
D. Team 1 lost to Team 2 by less than 5 runs.

7. Mrs. Moore’s class made a graph that shows the number of flowers grown by some of the students.

<table>
<thead>
<tr>
<th>Flowers Grown</th>
</tr>
</thead>
<tbody>
<tr>
<td>James</td>
</tr>
<tr>
<td>Gabby</td>
</tr>
<tr>
<td>Ed</td>
</tr>
<tr>
<td>Valencia</td>
</tr>
<tr>
<td>Leitha</td>
</tr>
</tbody>
</table>

\( \odot = 2 \text{ flowers} \)

If Leitha grew 12 flowers, how many symbols of flowers are needed to complete the graph?

A. 6
B. 10
C. 12
D. 24
8. From the information on the pictograph, which is a true statement?

<table>
<thead>
<tr>
<th></th>
<th>Fish Caught Daily</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mon.</td>
<td>![Fish Icon]</td>
</tr>
<tr>
<td>Tues.</td>
<td>![Fish Icon]</td>
</tr>
<tr>
<td>Wed.</td>
<td>![Fish Icon] ![Fish Icon] ![Fish Icon] ![Fish Icon] ![Fish Icon] ![Fish Icon] ![Fish Icon]</td>
</tr>
<tr>
<td>Thurs.</td>
<td>![Fish Icon] ![Fish Icon] ![Fish Icon] ![Fish Icon] ![Fish Icon]</td>
</tr>
<tr>
<td>Fri.</td>
<td>![Fish Icon] ![Fish Icon] ![Fish Icon] ![Fish Icon]</td>
</tr>
</tbody>
</table>

![Fish Icon] = 4 fish

A Fewer than 20 fish were caught on Monday.

B More than 15 fish were caught on Tuesday.

C More than 30 fish were caught on Wednesday.

D The most fish were caught on Friday.
9. How many students are in the class?

![Students' Birth Months Graph]

- A 28
- B 29
- C 30
- D 31
10. A group of students made a bar graph showing the number of books they read the first nine weeks of school.

Books Read the First Nine Weeks

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>2</th>
<th>4</th>
<th>6</th>
<th>8</th>
<th>10</th>
<th>12</th>
<th>14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jonathan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Latoya</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Terry</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Greg</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rita</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bryan</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Which students read the same number of books?

A  Jonathan and Latoya
B  Terry and Bryan
C  Greg and Rita
D  Jonathan and Rita

11. Students kept a tally of the number of days they were absent from school.

Data

<p>| |</p>
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Bill</td>
</tr>
<tr>
<td>Shelby</td>
</tr>
<tr>
<td>Sandy</td>
</tr>
<tr>
<td>Rebecca</td>
</tr>
</tbody>
</table>

They made a graph.

Number of Days Absent

<p>| |</p>
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Bill</td>
</tr>
<tr>
<td>Shelby</td>
</tr>
<tr>
<td>Sandy</td>
</tr>
<tr>
<td>Rebecca</td>
</tr>
</tbody>
</table>

How many blocks should Shelby shade in on the graph?

A  0
B  1
C  2
D  4
12. Chelsea records the number of seeds in each apple in a basket.

<table>
<thead>
<tr>
<th>Seeds</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>X</td>
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</tr>
<tr>
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<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

What could Chelsea most likely predict about the number of seeds in apples?

A. Most apples have 10 seeds.
B. Most apples have more than 10 seeds.
C. Most apples have 9 to 11 seeds.
D. Most apples have fewer than 10 seeds.

13. In order to finish the triangle, a line should be drawn from (C, 9) to which ordered pair?

A. (C, 3)
B. (C, 8)
C. (G, 3)
D. (H, 3)
14. Cary wants to draw a tree at point (E, 2) on the grid.

At which letter would the tree be located?

A  R  
B  T  
C  U  
D  V  

15. The ordered pair (F, 3) is the location of which point?

A  U
B  S
C  V
D  T
16. If a “T” is made on the grid, which other squares need to be shaded?

![Grid with shaded square]

A (F, 5) and (F, 2)
B (D, 2) and (F, 5)
C (D, 5) and (F, 3)
D (D, 5) and (F, 5)

17. Antonio drew this time line to show different events in his life. He would like to add his 1998 trip to Disney World to the time line.

Which letter shows where Antonio should add this event?

A A
B B
C C
D D
18. Megan is making a time line of her life for a class project.

Megan’s Time Line in Years

| July 1991 born | Went on first airplane ride | Started school | Lost first tooth | Started piano lessons | Celebrated ninth birthday |

If Megan lost her second tooth before she started piano lessons, where should she write this on the time line?

A  Point A
B  Point B
C  Point C
D  Point D

19. Lisa drew a time line of her day at school.

<table>
<thead>
<tr>
<th>8 a.m.</th>
<th>9 a.m.</th>
<th>10 a.m.</th>
<th>11 a.m.</th>
<th>12 noon</th>
<th>1 p.m.</th>
<th>2 p.m.</th>
<th>3 p.m.</th>
<th>4 p.m.</th>
</tr>
</thead>
<tbody>
<tr>
<td>bell</td>
<td>reading</td>
<td>snack</td>
<td>math</td>
<td>lunch</td>
<td>spelling</td>
<td>playtime</td>
<td>bell</td>
<td>home</td>
</tr>
</tbody>
</table>

What was Lisa probably doing at 11:55?

A  getting her math book
B  preparing for lunch
C  taking a spelling test
D  playing kickball
20. Kyle has a pocket full of marbles. He has one black, two green, three red, and two yellow. If he closes his eyes and pulls out one marble, which color is he most likely to pull out?

A. black  
B. green  
C. red  
D. yellow

21. On which color is the spinner arrow most likely to land?

A. Red  
B. Blue  
C. Green  
D. Yellow

22. Which of the following is true about the spinner?

A. The spinner is more likely to land on 2 than on 4.  
B. The spinner is as equally likely to land on 2 as on 4.  
C. The spinner is less likely to land on 4 than on 6.  
D. The spinner is less likely to land on 2 than on 6.
23. If this jar is shaken and one jellybean is picked out without looking, what color would it most likely be?

- Green
- Red
- Orange
- White

A. green  
B. red  
C. orange  
D. white

24. How many different ways can the soccer team color their flag with 3 different colors?

- 6 ways
- 8 ways
- 12 ways
- 16 ways

25. The Doughnut Shop sells regular size and jumbo size doughnuts of each type of doughnut they make. Today they are making sugared, glazed, chocolate, cinnamon, and jelly-filled doughnuts. If Karen wants to buy one doughnut, how many choices does she have?

- 5
- 7
- 9
- 10
26. Tony’s computer game has a three-digit secret code. The code has a 7, a 5, and a 3 in it. How many possible secret codes could there be with these three digits?

A 1  
B 4  
C 6  
D 9

27. Mindy wanted to have a different sandwich each day for lunch. Each sandwich would have one bread, one meat, and one cheese. She listed the types of bread, the sandwich meats, and the kinds of cheese in the chart below.

<table>
<thead>
<tr>
<th>Sandwich Fixings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bread</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Meat</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Cheese</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

How many different kinds of sandwiches can Mindy make?

A 16  
B 8  
C 6  
D 2

End of Goal 4 Sample Items

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Answers to EOG Mathematics Grade 3 Sample Items

Goal 4

1. **Objective 4.02**
   Display data on charts and graphs: picture, bar and line plots; describe data using mode.
   **Thinking Skill:** Analyzing  
   **Correct Answer:** A

2. **Objective 4.02**
   Display data on charts and graphs: picture, bar and line plots; describe data using mode.
   **Thinking Skill:** Analyzing  
   **Correct Answer:** A

3. **Objective 4.02**
   Display data on charts and graphs: picture, bar and line plots; describe data using mode.
   **Thinking Skill:** Analyzing  
   **Correct Answer:** C

4. **Objective 4.02**
   Display data on charts and graphs: picture, bar and line plots; describe data using mode.
   **Thinking Skill:** Analyzing  
   **Correct Answer:** C

5. **Objective 4.03**
   Construct graphs where symbols or scales represent multiple units.
   **Thinking Skill:** Analyzing  
   **Correct Answer:** B

6. **Objective 4.03**
   Construct graphs where symbols or scales represent multiple units.
   **Thinking Skill:** Analyzing  
   **Correct Answer:** A

7. **Objective 4.03**
   Construct graphs where symbols or scales represent multiple units.
   **Thinking Skill:** Analyzing  
   **Correct Answer:** A

8. **Objective 4.03**
   Construct graphs where symbols or scales represent multiple units.
   **Thinking Skill:** Integrating  
   **Correct Answer:** C
9. **Objective 4.04**
   Read and interpret graphs and charts (bar, picture, circle, line and line plots) as sources of information; identify main idea, draw conclusions and make predictions.
   **Thinking Skill:** Applying  
   **Correct Answer:** B

10. **Objective 4.04**
    Read and interpret graphs and charts (bar, picture, circle, line and line plots) as sources of information; identify main idea, draw conclusions and make predictions.
    **Thinking Skill:** Analyzing  
    **Correct Answer:** B

11. **Objective 4.04**
    Read and interpret graphs and charts (bar, picture, circle, line and line plots) as sources of information; identify main idea, draw conclusions and make predictions.
    **Thinking Skill:** Analyzing  
    **Correct Answer:** C

12. **Objective 4.04**
    Read and interpret graphs and charts (bar, picture, circle, line and line plots) as sources of information; identify main idea, draw conclusions and make predictions.
    **Thinking Skill:** Integrating  
    **Correct Answer:** C

13. **Objective 4.05**
    Name the ordered pair for a point on the grid; plot positions named by ordered pairs on a coordinate grid.
    **Thinking Skill:** Analyzing  
    **Correct Answer:** D

14. **Objective 4.05**
    Name the ordered pair for a point on the grid; plot positions named by ordered pairs on a coordinate grid.
    **Thinking Skill:** Analyzing  
    **Correct Answer:** C

15. **Objective 4.05**
    Name the ordered pair for a point on the grid; plot positions named by ordered pairs on a coordinate grid.
    **Thinking Skill:** Analyzing  
    **Correct Answer:** A
16. **Objective 4.05**
Name the ordered pair for a point on the grid; plot positions named by ordered pairs on a coordinate grid.

*Thinking Skill:* Analyzing  
*Correct Answer:* D

17. **Objective 4.06**
Construct and use time lines to display sequences of events.

*Thinking Skill:* Analyzing  
*Correct Answer:* C

18. **Objective 4.06**
Construct and use time lines to display sequences of events.

*Thinking Skill:* Analyzing  
*Correct Answer:* C

19. **Objective 4.06**
Construct and use time lines to display sequences of events.

*Thinking Skill:* Analyzing  
*Correct Answer:* B

20. **Objective 4.07**
Describe the probability of chance events as more, less or equally likely to occur.

*Thinking Skill:* Generating  
*Correct Answer:* C

21. **Objective 4.07**
Describe the probability of chance events as more, less or equally likely to occur.

*Thinking Skill:* Analyzing  
*Correct Answer:* A

22. **Objective 4.07**
Describe the probability of chance events as more, less or equally likely to occur.

*Thinking Skill:* Analyzing  
*Correct Answer:* B

23. **Objective 4.07**
Describe the probability of chance events as more, less or equally likely to occur.

*Thinking Skill:* Generating  
*Correct Answer:* C

24. **Objective 4.08**
List arrangements (permutations) and combinations of up to three items.

*Thinking Skill:* Organizing  
*Correct Answer:* A
25. **Objective 4.08**
List arrangements (permutations) and combinations of up to three items.
**Thinking Skill:** Analyzing  **Correct Answer:** D

26. **Objective 4.08**
List arrangements (permutations) and combinations of up to three items.
**Thinking Skill:** Analyzing  **Correct Answer:** C

27. **Objective 4.08**
List arrangements (permutations) and combinations of up to three items.
**Thinking Skill:** Applying  **Correct Answer:** B