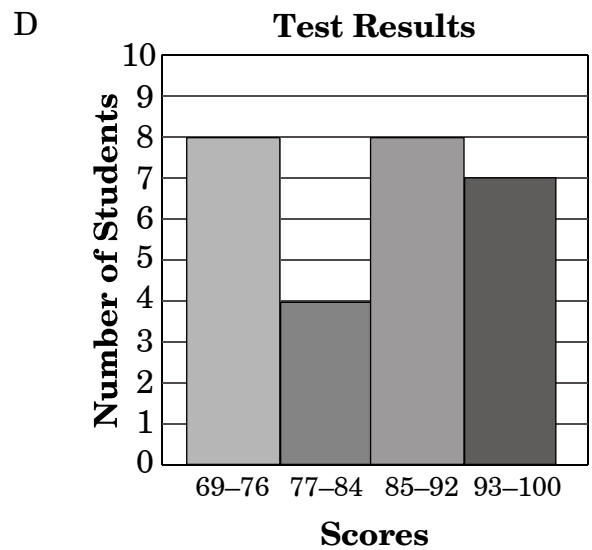
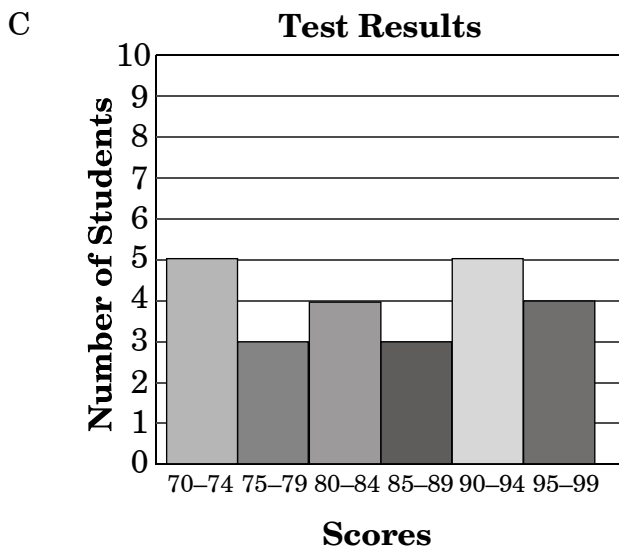
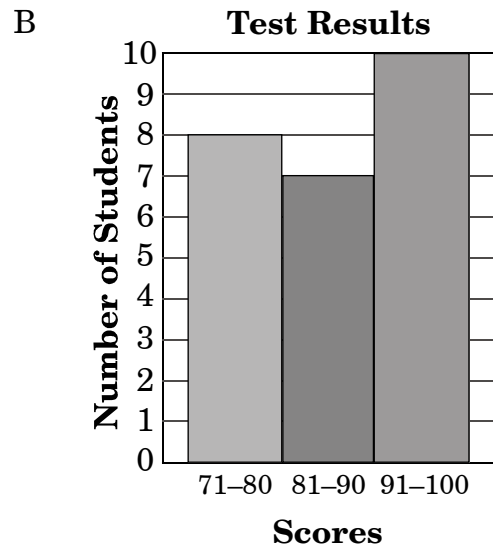
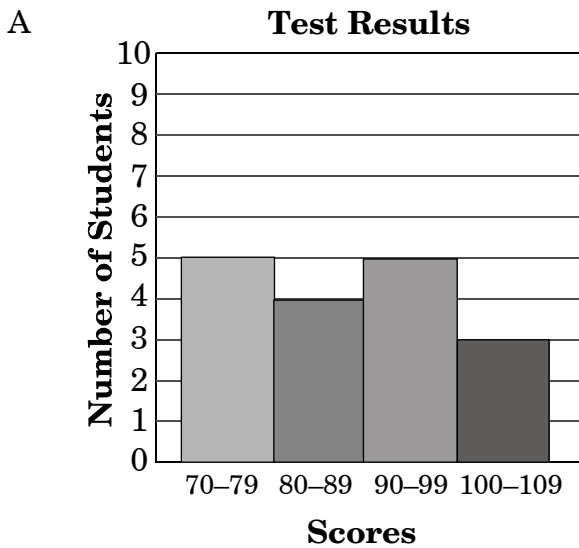


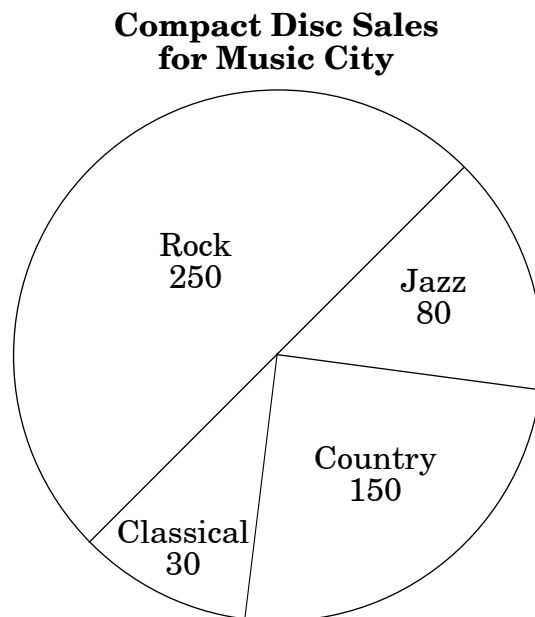
1. Which histogram best represents the scores in the frequency table?

Test Results	
Score	Tally
70	
75	
80	
85	
90	
95	
100	



2. On a histogram, if each interval represents 5 years, how many intervals would be needed to represent a group of people ages 21 to 65?
- A 7
- B 9
- C 10
- D 13

3. A music store totaled the number of compact discs sold for each of four different types of music. The results are shown on the circle graph, in which the sections are not drawn to scale.



For a more accurate picture, what would be the *approximate* measure of the central angle for the sector that represents jazz selections?

- A 16°
- B 21°
- C 56°
- D 105°

4. Bryan is making a circle graph to show what he does with his allowance. If he saves 15% of his allowance, what is the measure of the central angle for the sector of the graph labeled savings?
- A 306°
- B 153°
- C 54°
- D 27°
-

5. The manager of Milton Theater is planning to make a circle graph to show the different age groups that attended a concert on Saturday. The table below summarizes the data he collected.

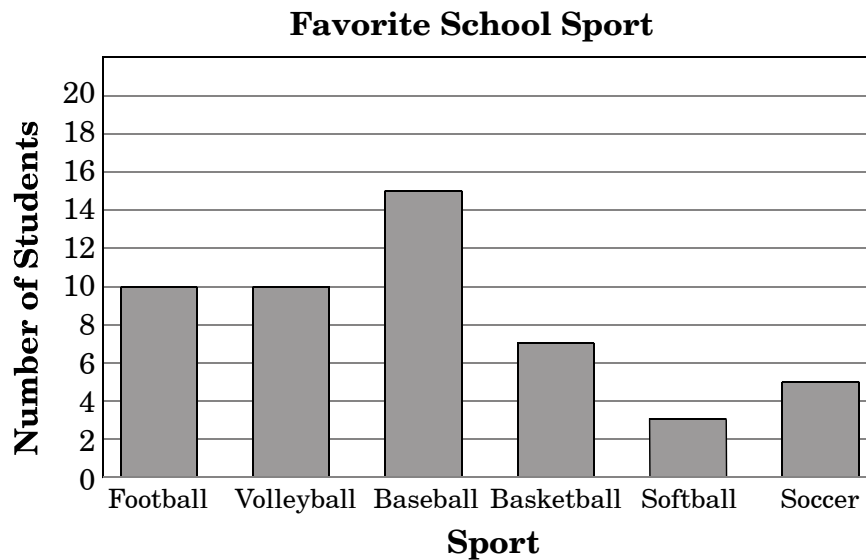
Concert Attendance by Age Group

Age Group	Number
Preschoolers	20
Students	450
Adults	910
Senior Citizens	620

What fraction of the circle would include the section representing the number of students who attended the concert?

- A $\frac{9}{40}$
- B $\frac{9}{31}$
- C $\frac{9}{20}$
- D $\frac{1}{3}$

6. Study the bar graph below. Use it to answer the following question.



If a circle graph is used to display the same data, what percent of the circle graph would represent baseball and softball?

- A 50%
- B 36%
- C 18%
- D 10%
-
7. Nicholas has five pairs of pants, eight shirts, and two pairs of shoes. How many days can he wear a different outfit consisting of a pair of pants, a shirt, and shoes?
- A 15
- B 26
- C 40
- D 80
8. Hakim rolled 2 fair six-sided number cubes (each numbered 1–6) and recorded the sum of the outcomes. How many different sums are possible?
- A 7
- B 11
- C 12
- D 36

9. The basketball team needs to select uniforms. They have the following choices:

Jersey	Red, White, Black
Shorts	Red, White, Black
Shoes	High Tops, Low Tops, Medium Tops

How many uniform combinations are possible?

- A 3
- B 9
- C 27
- D 81
-
10. Megan's family needs to choose the exterior paint for their new house. The exterior colors are white, blue, and beige. The trim colors are beige, brown, green, and rose. How many color combinations of exterior and trim are possible?
- A 12
- B 10
- C 9
- D 7
11. A president and vice president will be selected from 8 members of a club. In how many ways can these officers be selected?
- A 8
- B 28
- C 56
- D 64

12. Lawrence has 2 extra tickets to a basketball game and he has 6 friends who would like to go. How many different groups of two friends can Lawrence select to take to the game?

A 6
B 8
C 15
D 28

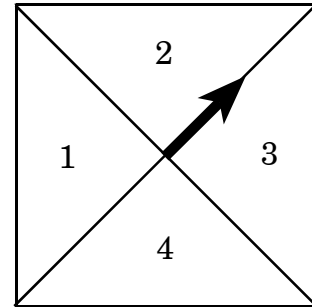
13. Kevin and four friends are taking turns playing a game. Only three people may play at a time. How many different combinations of three players are possible?

A 60
B 30
C 15
D 10

14. At the library, Rudy chose 5 books but he can check out only 2. How many ways can he check out only 2 from his 5 book choices?

A 5
B 10
C 15
D 20

15. If this fair spinner is spun twice, what is the probability of the spinner landing on 3, then 4?



A $\frac{1}{2}$

B $\frac{1}{4}$

C $\frac{1}{8}$

D $\frac{1}{16}$

16. If you toss a coin 3 times, what is the probability that the coin will land showing heads each time?

A $\frac{1}{9}$

B $\frac{1}{8}$

C $\frac{1}{6}$

D $\frac{1}{3}$

17. A bag contains an orange straw, a red straw, and a black straw. What is the probability of picking the orange straw twice without looking if, after the first pick, the straw is returned to the bag?

A 0

B $\frac{1}{9}$

C $\frac{3}{9}$

D $\frac{4}{9}$

18. If Quinn tosses a fair coin and then rolls a fair number cube labeled 1 through 6, what is the probability of tossing heads followed by rolling a number less than 3?

A $\frac{3}{12}$

B $\frac{2}{12}$

C $\frac{2}{16}$

D $\frac{1}{12}$

19. Sarita flipped a fair coin and it landed showing heads 30 times out of 50. What is the theoretical probability of getting heads the next time?

A 20%

B 30%

C 50%

D 60%

End of Goal 4 Sample Items

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Answers to EOG Mathematics Grade 7 Sample Items

Goal 4

- 1. Objective 4.01**
Interpret and construct histograms.
Thinking Skill: Analyzing **Correct Answer:** D
- 2. Objective 4.01**
Interpret and construct histograms.
Thinking Skill: Analyzing **Correct Answer:** B
- 3. Objective 4.03**
Construct circle graphs using ratios, proportions, and percents.
Thinking Skill: Applying **Correct Answer:** C
- 4. Objective 4.03**
Construct circle graphs using ratios, proportions, and percents.
Thinking Skill: Integrating **Correct Answer:** C
- 5. Objective 4.03**
Construct circle graphs using ratios, proportions, and percents.
Thinking Skill: Integrating **Correct Answer:** A
- 6. Objective 4.04**
Create, compare, contrast, and evaluate both orally and in writing, different graphic representations of the same data.
Thinking Skill: Applying **Correct Answer:** B
- 7. Objective 4.07**
Find all possible outcomes of simple experiments using such methods as lists, tree diagrams, frequency distribution tables, and the Fundamental Counting Principle.
Thinking Skill: Applying **Correct Answer:** D
- 8. Objective 4.07**
Find all possible outcomes of simple experiments using such methods as lists, tree diagrams, frequency distribution tables, and the Fundamental Counting Principle.
Thinking Skill: Analyzing **Correct Answer:** B

Answers to EOG Mathematics Grade 7 Sample Items

Goal 4

- 9. Objective 4.07**
Find all possible outcomes of simple experiments using such methods as lists, tree diagrams, frequency distribution tables, and the Fundamental Counting Principle.
Thinking Skill: Applying **Correct Answer:** C
- 10. Objective 4.07**
Find all possible outcomes of simple experiments using such methods as lists, tree diagrams, frequency distribution tables, and the Fundamental Counting Principle.
Thinking Skill: Applying **Correct Answer:** A
- 11. Objective 4.08**
Compute and apply simple permutations and combinations.
Thinking Skill: Applying **Correct Answer:** C
- 12. Objective 4.08**
Compute and apply simple permutations and combinations.
Thinking Skill: Applying **Correct Answer:** C
- 13. Objective 4.08**
Compute and apply simple permutations and combinations.
Thinking Skill: Applying **Correct Answer:** D
- 14. Objective 4.08**
Compute and apply simple permutations and combinations.
Thinking Skill: Applying **Correct Answer:** B
- 15. Objective 4.09**
Find the probability of independent events.
Thinking Skill: Analyzing **Correct Answer:** D
- 16. Objective 4.09**
Find the probability of independent events.
Thinking Skill: Applying **Correct Answer:** B
- 17. Objective 4.09**
Find the probability of independent events.
Thinking Skill: Applying **Correct Answer:** B

Answers to EOG Mathematics Grade 7 Sample Items

Goal 4

18. Objective 4.09

Find the probability of independent events.

Thinking Skill: Applying

Correct Answer: B

19. Objective 4.10

Identify or explain the relationship between experimental results and theoretical probability.

Thinking Skill: Analyzing

Correct Answer: C