

1. Which statement is true?

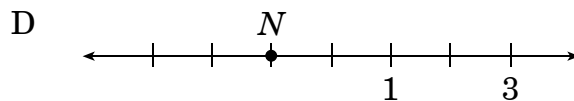
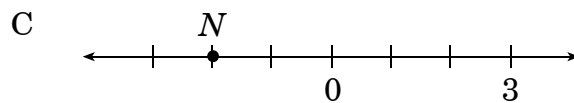
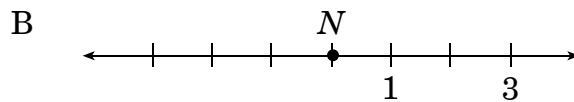
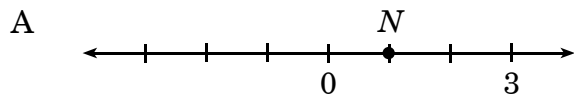
A $2 > -2$

B $2 < -4$

C $-2 < -4$

D $-4 > 4$

2. On which number line does the letter N represent the integer -1 ?



3. In the table below, which city has the coldest average temperature for November?

Average November Temperatures

City	Average Temperature
P	-13°F
Q	59°F
R	-15°F
S	32°F

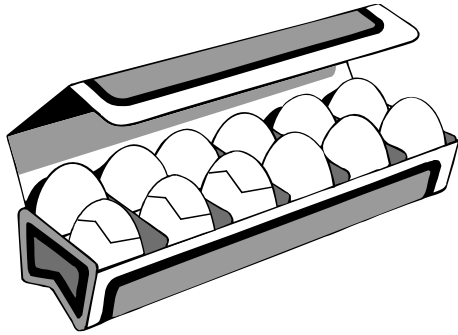
A city P

B city Q

C city R

D city S

4. One-fourth of the eggs in the carton are cracked.



What percent of the dozen are cracked?

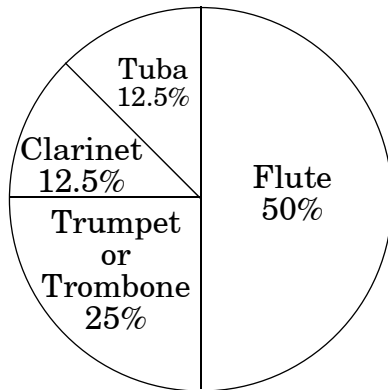
- A $66\frac{2}{3}\%$
- B $33\frac{1}{3}\%$
- C 30%
- D 25%
5. During a basketball game, Kelly made 15 successful shots out of 25 tries. What was her percent of success?
- A 10%
- B 40%
- C 50%
- D 60%

6. On a tree farm, 15% of the trees planted are pine, $\frac{2}{5}$ are oak, $\frac{1}{4}$ are maple, and $\frac{1}{5}$ are fruit trees. Of these four types of trees, which type has been planted the most?

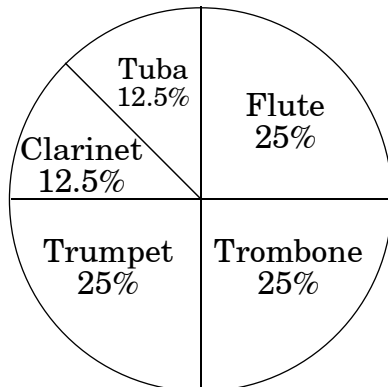
- A pine
- B oak
- C maple
- D fruit

7. According to these two circle graphs, which statement is correct?

**Band Instruments Used By
80 Seventh-Grade Girls**



**Band Instruments Used By
160 Seventh-Grade Boys**



- A The same number of boys and girls play the flute.
- B The flute is played by more girls than boys.
- C The number of boys playing either the tuba or the clarinet is the same as the number of girls playing the tuba or the clarinet.
- D Fifty girls play the trumpet or trombone.

8. Which statement is true?

A $\frac{1}{4} > 1\frac{1}{2}$

B $-4 < -5$

C $-5\frac{1}{2} > 3\frac{1}{2}$

D $-1 < -\frac{1}{2}$

9. Which list shows the numbers in order from least to greatest?

A 17.3%, 17.33, $17\frac{1}{3}$, $17\overline{34}$

B 17.33, $17\frac{1}{3}$, 17.3%, $17\overline{34}$

C $17\overline{34}$, 17.33, $17\frac{1}{3}$, 17.3%

D 17.3%, 17.33, $17\overline{34}$, $17\frac{1}{3}$

10. Which is the **best** estimate of 13.9624×0.501 ?

A 0

B 7

C 13

D 14

11. Andy has a rope 0.9 m long. Sherry has a rope one and a half times as long as Andy's. How long is Sherry's rope?
- A 0.45 m
B 1.35 m
C 1.80 m
D 2.25 m
12. The students in a woodworking class need four pieces of wood (each piece $\frac{3}{4}$ of a foot long) to start a project. At **most**, how many projects can be made from 4 feet of wood?
- A 1
B 3
C 4
D 5
13. Timothy has a fish tank. He wants to know how much water it will take to fill it to $\frac{5}{6}$ of its capacity. Timothy pours 20 quarts of water into the tank and realizes that it is $\frac{1}{6}$ full. How many gallons does he still need?
- A 20 gallons
B 45 gallons
C 65 gallons
D 80 gallons

14. 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 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 should be used to represent the Students age group?

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

15. Which is the prime factorization of 86?
- A 3×2^5
- B $2^3 \times 11$
- C $2 \times 4 \times 11$
- D 2×43
16. Angie works in a pet store. She needs to divide 36 angelfish, 42 rainbow fish, and 126 goldfish into aquariums so that each aquarium has the same number of each type of fish, and there are no fish left over. What is the ***greatest*** number of aquariums Angie can fill under these conditions?
- A 6
- B 7
- C 8
- D 12
17. Latisha has two pieces of ribbon she plans to cut. One piece of ribbon is 48 inches and the other is 80 inches. She plans to cut all the ribbon into pieces of equal lengths. What is the ***greatest*** possible length of each piece?
- A 6 in.
- B 8 in.
- C 16 in.
- D 32 in.

18. Which expression is equivalent to $3^3 \cdot 36 \cdot 2^4$?
- A $2^6 \cdot 3^5$
- B $2^8 \cdot 3^6$
- C $2^6 \cdot 3^6$
- D $2^8 \cdot 3^5$
19. The length of the orbit for Jupiter is 1.12×10^6 km per day. What is this distance written in standard form?
- A 112,000 km
- B 1,120,000 km
- C 11,200,000 km
- D 112,000,000 km
20. Earth is about 93,000,000 miles from the sun. What is this distance expressed in scientific notation?
- A 9.3×10^7 mi
- B 0.93×10^7 mi
- C 9.3×10^6 mi
- D 93×10^6 mi
21. The radius of an atom is one nanometer, which is approximately 3.937×10^{-8} inch. What is this length expressed in standard notation?
- A 0.000000003937 in.
- B 0.00000003937 in.
- C 0.0000003937 in.
- D 0.000003937 in.
22. Amanda correctly rewrote this problem using scientific notation.
- $$378,000,000 \div 0.000006$$
- Which did Amanda write?
- A $\frac{3.78 \times 10^8}{6.0 \times 10^{-6}}$
- B $\frac{0.378 \times 10^9}{0.6 \times 10^{-5}}$
- C $\frac{3.78 \times 10^6}{6.0 \times 10^{-6}}$
- D $\frac{3.78 \times 10^{-6}}{6.0 \times 10^8}$

23. Mrs. Patterson purchased 5 trays of flowers. The total cost was \$54.75. Each tray contained 2 dozen individual plants. After planting all of the flowers, Mrs. Patterson decided she needed an additional 18 plants. If the plants are priced individually, **about** how much should she expect to pay for the additional flowers?
- A \$4
- B \$8
- C \$16
- D \$41
24. Leaving her office, Allison took the elevator up 5 floors to a meeting. She then went down 12 floors to the cafeteria. The cafeteria is located on the fourth floor. Where is Allison's office located?
- A on the eleventh floor
- B on the tenth floor
- C on the fifth floor
- D on the third floor
25. The Thomas family went for a drive. Before they left, Mr. Thomas noticed the gas tank was $\frac{3}{4}$ full. When they returned home the gas tank was $\frac{1}{3}$ full. The gas tank holds 18 gallons. How many gallons of gas did the car use on the drive?
- A $6\frac{1}{2}$
- B $7\frac{1}{2}$
- C $8\frac{1}{2}$
- D $9\frac{1}{2}$

26. A middle school softball team won $\frac{4}{5}$ of its games this season. The team lost 4 games. How many games did the team play?

A 5

B 9

C 16

D 20

End of Goal 1 Sample Items

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Answers to EOG Grade 6 Math Sample Items

Goal 1

1. Objective 1.01

Develop number sense for negative rational numbers. A) Connect the model, number word, and number using a variety of representations, including the number line. B) Compare and order. C) Make estimates in appropriate situations.

Thinking Skill: Applying

Correct Answer: A

2. Objective 1.01

Develop number sense for negative rational numbers. A) Connect the model, number word, and number using a variety of representations, including the number line. B) Compare and order. C) Make estimates in appropriate situations.

Thinking Skill: Analyzing

Correct Answer: D

3. Objective 1.01

Develop number sense for negative rational numbers. A) Connect the model, number word, and number using a variety of representations, including the number line. B) Compare and order. C) Make estimates in appropriate situations.

Thinking Skill: Applying

Correct Answer: C

4. Objective 1.02

Develop meaning for percents. A) Connect the model, number word, and number using a variety of representations. B) Make estimates in appropriate situations.

Thinking Skill: Applying

Correct Answer: D

5. Objective 1.02

Develop meaning for percents. A) Connect the model, number word, and number using a variety of representations. B) Make estimates in appropriate situations.

Thinking Skill: Applying

Correct Answer: D

6. Objective 1.02

Develop meaning for percents. A) Connect the model, number word, and number using a variety of representations. B) Make estimates in appropriate situations.

Thinking Skill: Organizing

Correct Answer: B

7. Objective 1.02

Develop meaning for percents. A) Connect the model, number word, and number using a variety of representations. B) Make estimates in appropriate situations.

Thinking Skill: Analyzing

Correct Answer: A

8. Objective 1.03

Compare and order rational numbers.

Thinking Skill: Analyzing

Correct Answer: D

9. Objective 1.03

Compare and order rational numbers.

Thinking Skill: Organizing

Correct Answer: A

10. Objective 1.04

Develop fluency in addition, subtraction, multiplication, and division of non-negative rational numbers. A) Analyze computational strategies. B) Describe the effect of operations on size. C) Estimate the results of computations. D) Judge the reasonableness of solutions.

Thinking Skill: Applying

Correct Answer: B

11. Objective 1.04

Develop fluency in addition, subtraction, multiplication, and division of non-negative rational numbers. A) Analyze computational strategies. B) Describe the effect of operations on size. C) Estimate the results of computations. D) Judge the reasonableness of solutions.

Thinking Skill: Applying

Correct Answer: B

12. Objective 1.04

Develop fluency in addition, subtraction, multiplication, and division of non-negative rational numbers. A) Analyze computational strategies. B) Describe the effect of operations on size. C) Estimate the results of computations. D) Judge the reasonableness of solutions.

Thinking Skill: Applying

Correct Answer: A

13. Objective 1.04

Develop fluency in addition, subtraction, multiplication, and division of non-negative rational numbers. A) Analyze computational strategies. B) Describe the effect of operations on size. C) Estimate the results of computations. D) Judge the reasonableness of solutions.

Thinking Skill: Applying

Correct Answer: A

14. Objective 1.04

Develop fluency in addition, subtraction, multiplication, and division of non-negative rational numbers. A) Analyze computational strategies. B) Describe the effect of operations on size. C) Estimate the results of computations. D) Judge the reasonableness of solutions.

Thinking Skill: Integrating

Correct Answer: A

15. Objective 1.05

Develop fluency in the use of factors, multiples, exponential notation, and prime factorization.

Thinking Skill: Applying

Correct Answer: D

- 16. Objective 1.05**
Develop fluency in the use of factors, multiples, exponential notation, and prime factorization.
Thinking Skill: Analyzing **Correct Answer:** A
- 17. Objective 1.05**
Develop fluency in the use of factors, multiples, exponential notation, and prime factorization.
Thinking Skill: Analyzing **Correct Answer:** C
- 18. Objective 1.05**
Develop fluency in the use of factors, multiples, exponential notation, and prime factorization.
Thinking Skill: Analyzing **Correct Answer:** A
- 19. Objective 1.06**
Use exponential, scientific, and calculator notation to write very large and very small numbers.
Thinking Skill: Applying **Correct Answer:** B
- 20. Objective 1.06**
Use exponential, scientific, and calculator notation to write very large and very small numbers.
Thinking Skill: Applying **Correct Answer:** A
- 21. Objective 1.06**
Use exponential, scientific, and calculator notation to write very large and very small numbers.
Thinking Skill: Applying **Correct Answer:** B
- 22. Objective 1.06**
Use exponential, scientific, and calculator notation to write very large and very small numbers.
Thinking Skill: Analyzing **Correct Answer:** A
- 23. Objective 1.07**
Develop flexibility in solving problems by selecting strategies and using mental computation, estimation, calculators or computers, and paper and pencil.
Thinking Skill: Analyzing **Correct Answer:** B

24. Objective 1.07

Develop flexibility in solving problems by selecting strategies and using mental computation, estimation, calculators or computers, and paper and pencil.

Thinking Skill: Analyzing

Correct Answer: A

25. Objective 1.07

Develop flexibility in solving problems by selecting strategies and using mental computation, estimation, calculators or computers, and paper and pencil.

Thinking Skill: Applying

Correct Answer: B

26. Objective 1.07

Develop flexibility in solving problems by selecting strategies and using mental computation, estimation, calculators or computers, and paper and pencil.

Thinking Skill: Analyzing

Correct Answer: D