



National Qualifying Examination – Sample Exam (4th and 5th Grade Division)

Instructions – Mark the letter of the correct answer on the answer sheet or leave it blank. Correct answers are worth 2 points. Incorrect answers and questions left blank are worth 0 points.

Please note – This sample exam has 15 questions, but the qualifying exam given at regional competitions will have 35 questions.

1. The probability of flipping a coin and getting heads is which of these?
 - A. $\frac{1}{4}$
 - B. $\frac{1}{2}$
 - C. 1
 - D. 2
2. Which 3D shape has 6 faces, 12 edges, and 8 vertices?
 - A. Cone
 - B. Pyramid
 - C. Sphere
 - D. Cube
3. A triangle has angles 40° and 60° . What is the third angle?
 - A. 70°
 - B. 80°
 - C. 90°
 - D. 100°
4. What is $\frac{1}{3}$ of 27?
 - A. 6
 - B. 8
 - C. 9
 - D. 12
5. If $x = 4$, what is the value of $2x^2 + 5$?
 - A. 18
 - B. 20
 - C. 25
 - D. 37
6. A pencil costs \$0.75. How much do 17 pencils cost?
 - A. \$11.50
 - B. \$12.75
 - C. \$13.25
 - D. \$14.50
7. Which measurement is the largest?
 - A. 1 foot
 - B. 1 yard
 - C. 38 inches
 - D. 3 inches
8. What is the least common multiple of 8 and 12?
 - A. 12
 - B. 24
 - C. 36
 - D. 48
9. A car uses 12 gallons of gas to travel 300 miles. How many miles per gallon does it get?
 - A. 23 mpg
 - B. 25 mpg
 - C. 27 mpg
 - D. 29 mpg
10. Solve the following equation for n.
 $5n = 45$
 - A. 7
 - B. 8
 - C. 9
 - D. 10
11. A school has 8 buses. Each bus carries 45 students. How many students in total?
 - A. 320
 - B. 340
 - C. 360
 - D. 380
12. What is 15% of 200?
 - A. 20
 - B. 25
 - C. 30
 - D. 35
13. The area of a rectangle with length 12 cm and width 7 cm is which of these?
 - A. 84 cm^2
 - B. 96 cm^2
 - C. 100 cm^2
 - D. 120 cm^2
14. The sum of the interior angles of a quadrilateral is:
 - A. 180°
 - B. 270°
 - C. 360°
 - D. 540°
15. If $7 + k = 20$, what is k?
 - A. 11
 - B. 13
 - C. 14
 - D. 17