

MCAS Archive Questions

10.N.3

2008, Mathematics - Grade 10

Question 2: Multiple-Choice

Reporting Category: Number Sense and Operations

Standard: 10.N.3



Which of the following is closest to the value of the expression below?

$$\sqrt{5^2 - 8}$$

- A. 1.4
- B. 2.2
- C. 4.1
- D. 8.5

2008, Mathematics - Grade 10

Question 7: Multiple-Choice

Reporting Category: Number Sense and Operations

Standard: 10.N.3



A square has an area of 75 square meters. Which of the following is closest to the length of a side of the square?

- A. 7.8 meters
- B. 8.2 meters
- C. 8.7 meters
- D. 9.1 meters

2007, Mathematics - Grade 10
Question 2: Multiple-Choice
Reporting Category: Number Sense and Operations
Standard: 10.N.3



Which of the following is closest to the value of $\sqrt{140}$?

- A. 11
- B. 12
- C. 70
- D. 72

2007, Mathematics - Grade 10
Question 9: Multiple-Choice
Reporting Category: Number Sense and Operations
Standard: 10.N.3



Which of the following is closest to the cube root of 150?

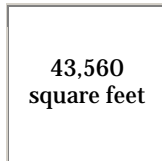
- A. 5
- B. 12
- C. 15
- D. 50

2006, Mathematics - Grade 10
Question 11: Multiple-Choice
Reporting Category: Number Sense and Operations
Standard: 10.N.3



The town park is shaped like a square and has an area of 43,560 square feet, as shown below.

Town Park



The expression below can be used to find the length, in feet, of one side of the park.

$$\sqrt{43,560}$$

Which of the following is closest to the length of one side of the park?

- A. 100 feet
- B. 200 feet
- C. 300 feet
- D. 400 feet

2005, Mathematics - Grade 10
Question 6: Multiple-Choice
Reporting Category: Number Sense and Operations



Standard: 10.N.3

The Golden Ratio is defined by the expression shown below.

$$\frac{1 + \sqrt{5}}{2}$$

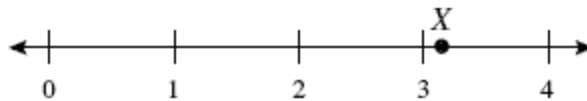
Which of the following is closest to the value of the ratio?

- A. 1.1
- B. 1.6
- C. 2.1
- D. 2.9

2005, Mathematics - Grade 10
Question 12: Multiple-Choice
Reporting Category: Number Sense and Operations
Standard: 10.N.3



Point X is graphed on the number line as shown below.



Which of the following numbers is closest to the location of point X ?

- A. $\sqrt{6}$
- B. $\sqrt{8}$
- C. $\sqrt{11}$
- D. $\sqrt{13}$

2004, Mathematics - Grade 10
Question 4: Multiple-Choice
Reporting Category: Number Sense and Operations
Standard: 10.N.3



Which statement is **not** true?

- A. $4^3 < 70 < 5^3$
- B. $2(5^2) < 70 < 3(5^2)$
- C. $8^2 < 70 < 9^2$
- D. $3^3 < 70 < 4^3$

2004, Mathematics - Grade 10
Question 14: Multiple-Choice
Reporting Category: Number Sense and Operations
Standard: 10.N.3



Which of the following is closest to $\sqrt{53}$?

- A. 6.7
- B. 7.3
- C. 7.7
- D. 8.3

2004, Mathematics - Grade 10
Question 19: Short-Answer
Reporting Category: Number Sense and Operations
Standard: 10.N.3

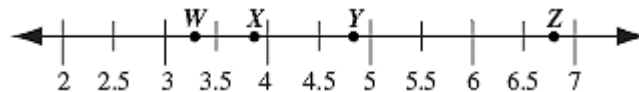


A cube has a volume of 64 cubic inches. What is the length, in inches, of each edge of the cube?

2003, Mathematics - Grade 10
Question 8: Multiple-Choice
Reporting Category: Number Sense and Operations
Standard: 10.N.3



Which point most closely indicates the location of $\sqrt[3]{60}$ on the number line below?



- A. *W*
- B. *X*
- C. *Y*
- D. *Z*

2003, Mathematics - Grade 10
Question 14: Multiple-Choice
Reporting Category: Number Sense and Operations
Standard: 10.N.3



Which of the following is closest to the value of $\frac{7 - \sqrt{2}}{2}$?

- A. 1.1
- B. 2.8
- C. 6.0
- D. 6.3

2003, Mathematics - Grade 10
Question 15: Short-Answer
Reporting Category: Number Sense and Operations
Standard: 10.N.3



What is the solution to the equation $\sqrt[4]{x} = 16$?