TEST NAME: **Benchmark Review Math 8, 2**
TEST ID: **828136**
GRADE: **08 - Eighth Grade**
SUBJECT: **Mathematics**
TEST CATEGORY: **My Classroom**

Student: _____

Class: _____

Date: _____

1. **Which value of *x* makes the following equation true?**

$2^x = 1$

A. 0
B. 1
C. 2
D. 3

2. **Which number is equivalent to** $\left(\frac{1}{2}\right)^4 (2)^3 (4)^2$?

A. 4
B. 8
C. 16
D. 96

3. Which is an expression equivalent to $\sqrt{64}$?

A. 32
B. 2^3
C. 4^2
D. $4\sqrt{16}$

4. **Willie wants to paint a wall in his bedroom. He measures the length and the width of the wall and finds that it is a square and that the area of the wall is 81 square feet. What is the length of Willie's wall?**

A. 4.5 feet
B. 8.1 feet
C. 9.0 feet
D. 10.0 feet

5. In 1974, a computer could complete 3×10^8 computations per second. In 2011, a computer could complete 1×10^{16} computations per second. Which number is closest to how many times faster the 2011 computer is than the 1974 computer?

A. $\frac{1}{3}$
B. 3
C. $3{,}000$
D. $30{,}000{,}000$

6. **The diameter of a grain of sand is 0.06534 millimeter. Which value is the best estimate of this diameter?**

A. 6×10^{-3}millimeter

B. 7×10^{-3}millimeter

C. 6×10^{-2}millimeter

D. 7×10^{-2}millimeter

7. **The distance from Tallahassee, Florida, to London, England, is** 4.368×10^{3} **miles. The distance from London, England, to Tokyo, Japan, is** 6.424×10^{3} **miles. If you were to fly from Tallahassee to London and then to Tokyo, how many miles would you have traveled?**

A. 2.056×10^{3}

B. 28.06×10^{3}

C. 1.0792×10^{4}

D. 10.792×10^{6}

8. What is the value equivalent to $\frac{5.5 \times 10^{-4}}{0.02}$?

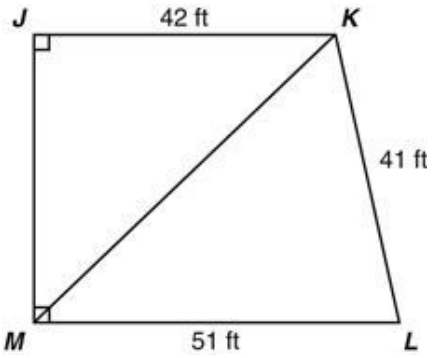
A. 1.1×10^{-5}

B. 1.1×10^{-2}

C. 2.75×10^{-5}

D. 2.75×10^{-2}

9. **In Quadrilateral *JKLM* below,** $\angle KJM$ **and** $\angle JML$ **are right angles. The dimensions shown are in feet.**



What is the length of $\overline{KM}$?

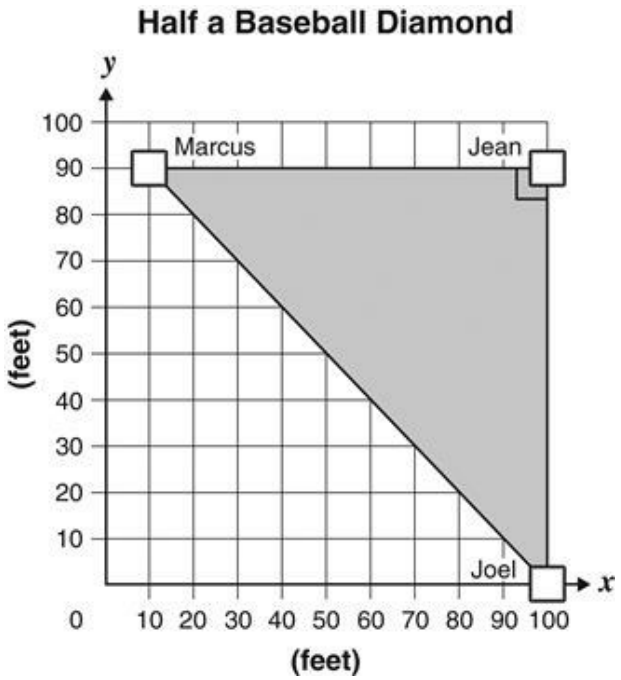
A. 40 feet

B. 51 feet

C. 58 feet

D. 65 feet

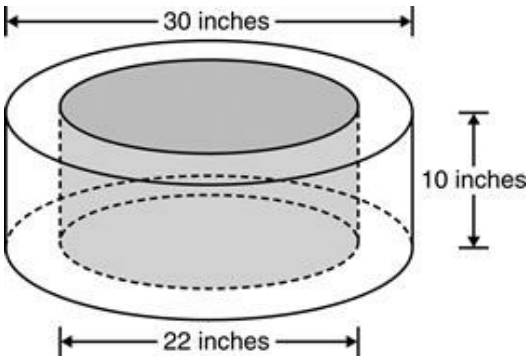
10. **Marcus, Jean, and Joel are standing on the bases of a baseball field as shown below.**



The line segments that connect 2nd base to 1st base and 2nd base to 3rd base form a right angle. Marcus is on 3rd base and he is 90 feet from Jean who is on 2nd base. Jean is 90 feet from Joel who is on 1st base. How far, in feet, is Marcus from Joel?

A. 45
B. 90
C. $90\sqrt{2}$
D. $90\sqrt{3}$

11. **A cylinder was removed from the inside of another cylinder to form the solid below.**



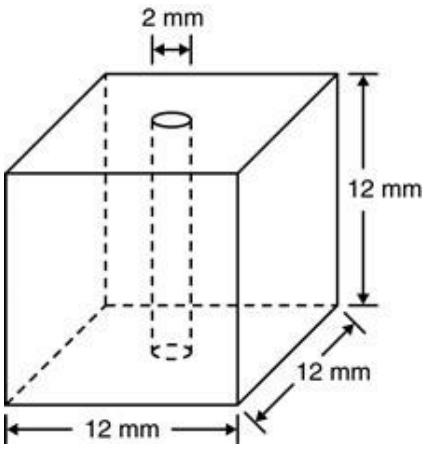
Which is the closest to the volume of the solid that remained?

A. 2,286 cubic inches
B. 3,266 cubic inches
C. 10,864 cubic inches
D. 13,062 cubic inches

12. **A hollow glass cone is filled with perfume and placed inside of a hollow cylindrical container with the same height and diameter as the cone. The cylinder will then be filled with packing material. If the cone occupies 60 cm^3 of space, how many cubic centimeters of packing material will be needed?**

A. 30
B. 60
C. 120
D. 180

13. **A cylinder 12 millimeters tall was removed from a cube as shown below.**



Which measure is closest to the volume of the remaining cube?

A. 1,577 cubic millimeters
B. 1,690 cubic millimeters
C. 1,766 cubic millimeters
D. 1,879 cubic millimeters

14. **The value of $\sqrt{33}$ is between what two numbers?**

A. between 3 and 4
B. between 5 and 6
C. between 16 and 17
D. between 32 and 34

15. **Between which two whole numbers is $\sqrt{98}$?**

A. 8 and 9
B. 9 and 10
C. 10 and 11
D. 11 and 12