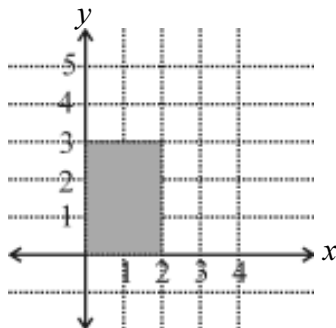


1. A stack of 100 nickels has a height of 6.25 inches. What is the value, in dollars, of an 8-foot stack of nickels? Express your answer to the nearest hundredth.

1. _____

2. On the grid below, Beatrice draws all the lines with integer y -intercepts and slope 1 or -1 . The lines form many intersection points. How many of these intersection points lie in the interior of the shaded region?

2. _____

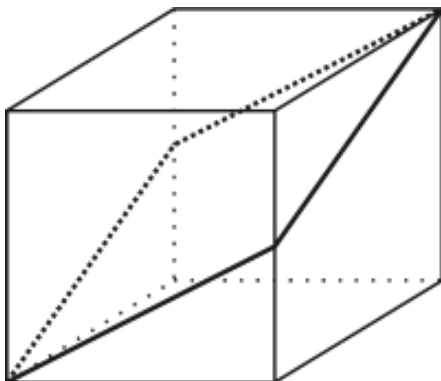


3. The sum of 9 consecutive integers is 9. What is the least of these 9 integers?

3. _____

4. A cube is sliced by a plane which goes through two opposite corners and the midpoints of two edges as shown. If the cube has edge length one unit, how many square units are in the area of the rhombus formed by the intersection of the plane and the cube? Express your answer as a common fraction in simplest radical form.

4. _____



5. Of the 6.25 billion people in the world, 310 million live in North America. What percent of the world's population lives in North America? Express your answer to the nearest whole number.

5. _____

6. Paco uses a spinner to select a number from 1 through 5, each with equal probability. Manu uses a different spinner to select a number from 1 through 10, each with equal probability. What is the probability that the product of Manu's number and Paco's number is less than 30? Express your answer as a common fraction.

6. _____

7. What is the smallest positive integer N such that the value $7 + 30 \times N$ is not a prime number?

7. _____

8. A regular octahedron is made up of eight equilateral triangles, each with side length one unit, as shown below. If an ant starts at the top vertex and walks along the edges of the triangles without ever traversing the same edge twice, how many units are in the maximum distance she could walk before first returning to the starting vertex?

8. _____

