1 Name the angle

A

$\angle$ b= _____ = _____

B b C

2 Mark the following angles a, b, and c inside the figure.
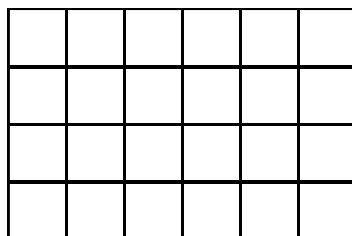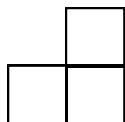
(a) $\angle$ LMN = $\angle$ a

(b) $\angle$ JKL = $\angle$ b

(c) $\angle$ JNM = $\angle$ c

N M J L K
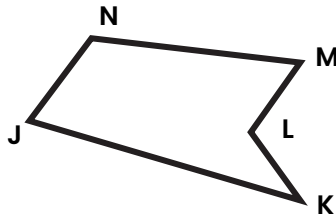
3 An empty bag has a mass of 60 g. It has a mass of 980 g when it is filled with marbles. If each marble has a mass of 8 g, how many marbles are there in the bag?

4 Each of 1,000 cards has a different number from 0 to 999. Cards with a ones, a tens, or a hundreds digit greater than 5 are mine. The other cards are yours. How many of the cards are mine?

5 Use 8 small figures on the left to cover the figure on the right. In how many ways can you do this?

6 It is 225 minutes until midnight. What time is it on a 24-hour digital clock?

7 A bakery makes buns and cupcakes. In 1 hour, 100 bakers can make 300 buns and 200 cupcakes. In 2 hours, 60 bakers can make 240 buns and 300 cupcakes. In 3 hours, 50 bakers can make 150 buns and k cupcakes. If all of the bakers work at the same rate, find k.

8 For his birthday, Bert got a box that holds 125 jellybeans when filled to capacity. A few weeks later, Carrie got a larger box full of jellybeans. Her box is twice as high, twice as wide, and twice as long as Bert's. Approximately how many jellybeans did Carrie get?

(A) 250   (B) 500   (C) 625   (D) 750   (E) 1000

9 A portion of a corner of a tiled floor is shown. If the entire floor is tiled in this way and each of the four corners looks like this one, then what fraction of the tiled floor is made up of darker tiles?
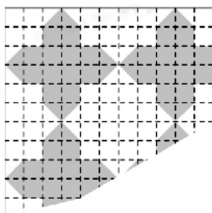
(A) $\dfrac{1}{3}$ (B) $\dfrac{4}{9}$ (C) $\dfrac{1}{2}$ (D) $\dfrac{5}{9}$ (E) $\dfrac{5}{8}$

10 Miki has a dozen oranges of the same size and a dozen pears of the same size. Miki used her juicer to extract 8 ounces of pear juice from 3 pears and 8 ounces of orange juice from 2 oranges. She made a pear-orange juice blend from an equal number of pears and oranges. What percent of the blend is pear juice?

(A) 30   (B) 40   (C) 50   (D) 60   (E) 70