1 Write the number represented by the stars.

10,000 10,000 10,000	100 100
10,000 10,000 10,000	100 100
10,000 10,000	100 100

10 10
10
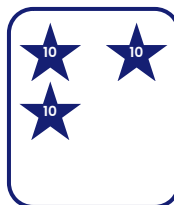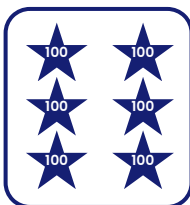
In figures: _____   **In words:** _____

2 Write the value represented by each digit.

4 5 7 8 0

→ _____
→ _____
→ _____
→ _____
→ _____
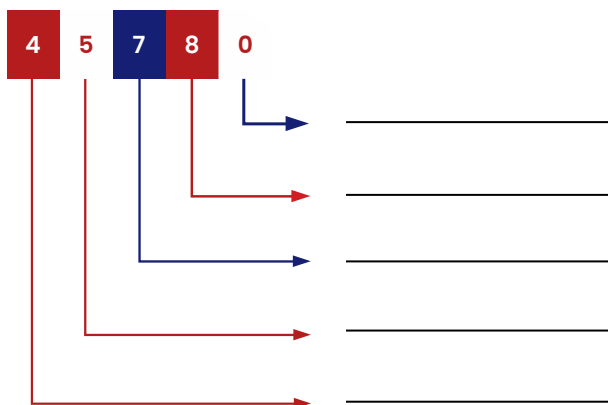
3 Arrange the following numbers in order. Begin with the smallest number.

5,463   5,643   5,356   5,436
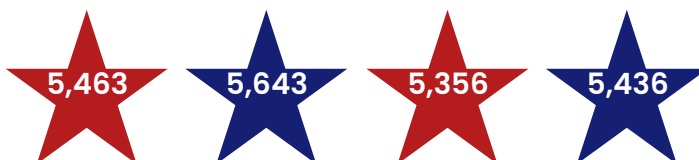
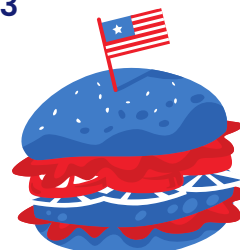**4** What fraction of the shapes in the box are ☆ ?
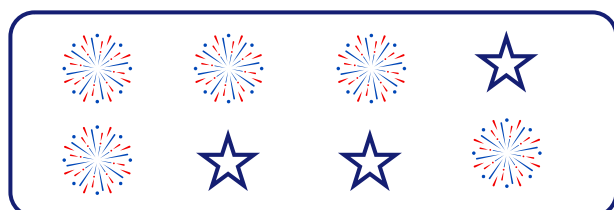
(1) $\frac{3}{5}$ (2) $\frac{3}{8}$ (3) $\frac{5}{8}$ (4) $\frac{5}{3}$

5 Amy, Bruce, Chris, Donna, and Eve had a race. When asked in which order they finished, they all answered with a true and a false statement as follows:

Amy: Bruce came second and I finished in third place
Bruce: I finished second and Eve was fourth.
Chris: I won and Donna came second.
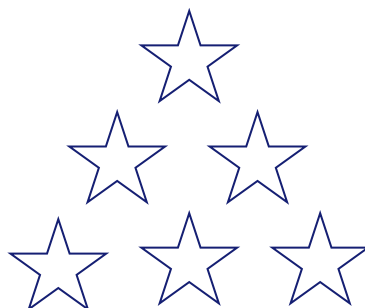**Donna:** I was third and Chris came last.
Eve: I came fourth and Amy won.

In which order did the participants finish?

6 Lucy wants to put the numbers 2, 3, 4, 5, 6, and 10 into the flags so that the product of the three numbers along each edge are the same, and as large as possible. What is the product?

7 The figure shows part of a tiling, which extends indefinitely in every direction across the whole plane. Each tile is a regular hexagon. Some of the tiles are white, the others are black. What fraction of the plane is black?
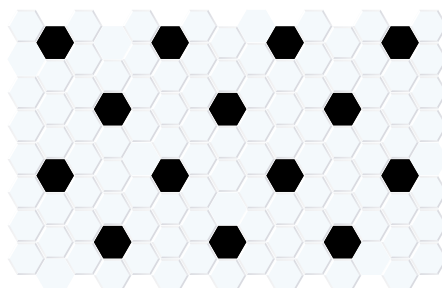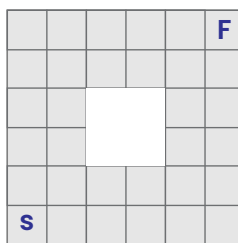
8 The board shown has 32 cells, one of which is labelled S and another F. The shortest path starting at S and finishing at F involves exactly nine other cells and ten moves, where each move goes from cell to cell "horizontally" or "vertically" across an edge. How many paths of this length are there from S to F?

9 How many different ways are there to color the given star using four different colors so that the adjacent parts have different colors?
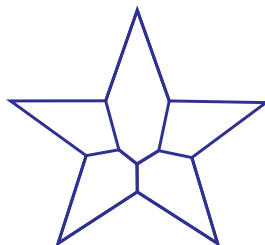
10 On average, for every 4 sports cars sold at the local dealership, 7 sedans are sold. The dealership predicts that it will sell 28 sports cars next month. How many sedans does it expect to sell?

(A) 7   (B) 32   (C) 35   (D) 49   (E) 112