1
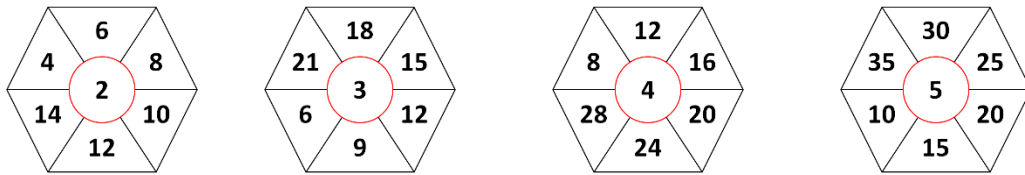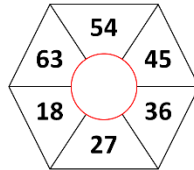

The pattern of the numbers in the hexagon above is repeated in the hexagon below.

What number goes in the red circle?

A   6

B   7

C   8

D   9

E   12

2   Of the three-digit integers less than 400, how many have two digits that are equal to each other and the remaining digit different from the other two?

A   90

B   80

C   81

D   45

E   36

3   Carlton bought 10 airplanes.

He bought some of the airplanes at the full price of $2 million per airplane and bought some at a discounted price of $1.6 million per airplane.

If he spent a total of $18 million, how many airplanes did he buy at a discounted price?

A 4

B 5

C 6

D 7

E 8

4   A bag contains 24 marbles.

The number of red marbles in the bag is twice the number of marbles.

The number of red and green marbles combined is 5 times the number of blue marbles.

How many more green marbles than red marbles are there in the bag?

A 4

B 6

C 8

D 10

E 12

5   The area of a farm lot is 9 600 square metres.

If 1 200 kilograms of fertilizer are spread evenly across the entire farm lot, how many kilograms of fertilizer was spread over an area of the farm lot measuring 3 600 square metres?

A   450

B   600

C   750

D   2 400

E   3 200

6   The total mass of a tin can and the gumballs it contains is 2 kilograms.

After $\frac{3}{4}$ of the gumballs are eaten, the mass of the tin can and the remaining gumballs is 0.8 kilograms.

What is the mass of the empty tin can?

A   0.2 kilograms

B   0.3 kilograms

C   0.4 kilograms

D   0.5 kilograms

E   0.6 kilograms

7 Jake took an ice block out of the freezer.

In the first hour, $\frac{3}{4}$ of the ice block melted.

In the second hour, $\frac{3}{4}$ of the remaining ice block melted.

If after two hours, the volume of the ice block was 0.5 cubic metres, what is the original volume of the cubic block?

A 2.5 cubic metres

B 3 cubic metres

C 4 cubic metres

D 6.5 cubic metres

E 8 cubic metres

8 A total of 800 people were surveyed whether they like the two new flavours of ice cream - cherry mint and bubble gum.

Each answer was either "yes" or "no" or "undecided".

The number of people who gave these answers were listed in the table below.

	YES	NO	UNDECIDED
Cherry mint	500	200	100
Bubble gum	400	100	300

If 200 people answered "yes" only for cherry mint, how many people did not answer "yes" for either flavour?

A 100

B 200

C 300

D 400

E 500

9 Four friends, Anne, Brenda, Jennifer, and Cecile, went shopping for dresses last weekend.

Brenda spent $400 more than Jennifer did.

Cecile spent $1 200 less than Anne did.

Anne spent $400 more than Brenda did.

How many more dollars did Jennifer spend than Cecile did?

A $400

B $600
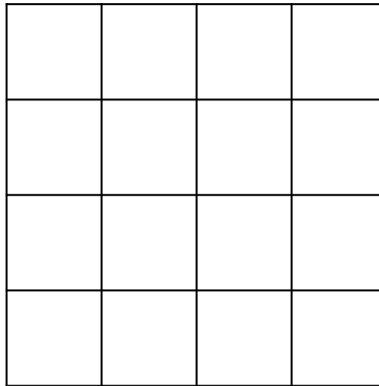
C $800

D $1 000

E $1 200

10 A square is divided into 16 equal sections.

The number of sections that Tom needs to colour red is the same as the number of sections he needs to colour yellow.

The number of sections he needs to colour blue is twice the number of sections he needs to colour yellow.

The ratio of the number of sections he needs to colour blue to the number of sections he needs to colour green is 3 to 2.

How many sections does he need to colour green?

A 2

B 3

C 4

D 6

E 8