PATTERNS

1. The first three numbers make a pattern.

$$4, \quad 12, \quad 36,$$

If the pattern continues the same way, what will be the next three numbers in the pattern?

a. 100, 200, 300	b. 108, 324, 972	c. 39, 42, 45	d. 42, 50, 58

2. Jacob saw these blocks being built. Each of the figures has 2 more blocks than the figure before it.
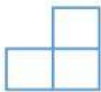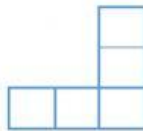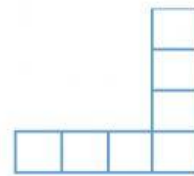
Figure 1   Figure 2   Figure 3

If this pattern continues, how many blocks should the 6th figure have?

a. 9	b. 11	c. 13	d. 15

3. Look at the number pattern below.

$$4, \quad 5, \quad 8, \quad 13, \quad 20, \quad 29,$$

Which pattern follows the same rule as the pattern in the picture?
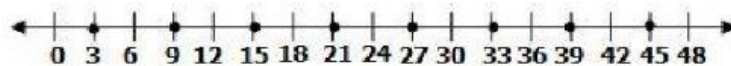
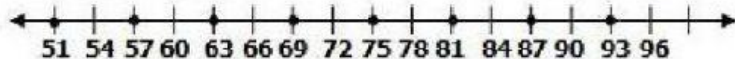| a. 3, 5, 9, 15, 23, 33	b. 3, 4, 7, 12, 19, 28
c. 3, 6, 9, 15, 18, 21	d. 3, 9, 18, 21, 27, 33

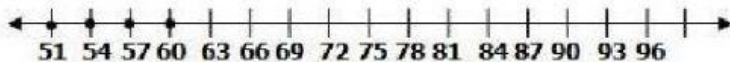**4. The points on this number line represent a pattern.**

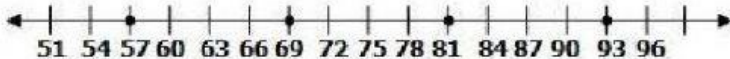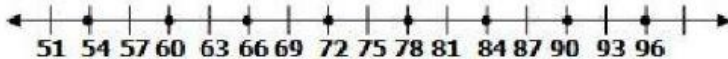**Which number line continues the pattern of points in the same way?**

a.

b.

c.

d.

5. Evie is using a pattern to make figures from paper hearts like this one:
She has made four figures using this pattern, as shown.

Figure 1 Figure 2 Figure 3 Figure 4

Exactly how many paper hearts will Harper need to make the 7th figure in this pattern?

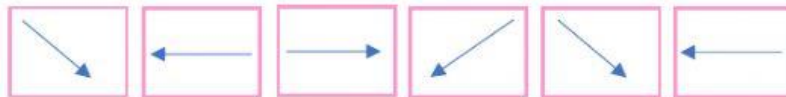| a. 25	b. 36	c. 49	d. 64

6. The first four fractions in the pattern below were made using the addition rule.

$$\frac{1}{5}, \quad \frac{3}{5}, \quad 1,$$

If the pattern continues the same way, what will be the next fraction in the pattern?

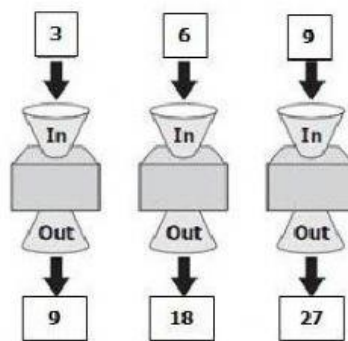| a. $\frac{5}{5}$	b. $1\frac{1}{5}$	c. $1\frac{2}{5}$	d. $1\frac{3}{5}$

7. These figures form a pattern.

If the pattern continues the same way, what will be the 11th shape in the pattern?

a.	b.	c.	d.

8. A number machine uses a multiplication rule to change into different numbers. The picture shows what happened when three numbers went into and came out of the same number machine.

What number should come out if the number 11 goes into the machine?

a. 30	b. 33	c. 36	d. 39

9. The first four fractions in the pattern below were made using the subtraction rule.

$$4\frac{2}{8}, \quad 4, \quad 3\frac{6}{8}, \quad 3\frac{4}{8},$$

If the pattern continues the same way, what will be the next fraction in the pattern?

a. $3\frac{2}{8}$	b. $3\frac{3}{8}$	c. $3\frac{1}{8}$	d. 2

10. The table has information about the number of pieces of candy contained in a package.

Number of Packages	2	4	6	8
Pieces of Candy	18	36	54	72

Based on the table, what would be the total number of pieces of candy in 10 of these packages?

a. 81	b. 90	c. 99	d. 108