

Number Rules

1. You are given the following rule: $\text{number} \longrightarrow (\text{number} \times 2) + 1$

What will happen to these numbers if you follow this rule?

- a. $4 \longrightarrow 9$ b. $7 \longrightarrow 15$ c. $10 \longrightarrow 21$
d. $1 \longrightarrow 3$ e. $100 \longrightarrow 201$ f. $20 \longrightarrow 41$

2. Use the following rule: $\text{number} \longrightarrow (\text{number} \div 3) - 1$

What will happen to these numbers if you follow this rule?

- a. $6 \longrightarrow 1$ b. $9 \longrightarrow 2$ c. $27 \longrightarrow 8$
d. $300 \longrightarrow 99$ e. $0 \longrightarrow -1$ f. $99 \longrightarrow 32$

3. Use the following rule: $n \longrightarrow n + 1$

- a. $8 \longrightarrow 9$ b. $4 \longrightarrow 5$ c. $98 \longrightarrow 99$
d. $1000 \longrightarrow 1001$ e. $0 \longrightarrow 1$ f. $-4 \longrightarrow -3$

4. Use the following rule: $n \longrightarrow 5n$

- a. $8 \longrightarrow 40$ b. $4 \longrightarrow 20$ c. $10 \longrightarrow 50$
d. $1000 \longrightarrow 5000$ e. $0 \longrightarrow 0$ f. $-4 \longrightarrow -20$

5. Use the following rule: $n \longrightarrow 4n + 1$

What will happen to these numbers if you follow this rule?

- a. $8 \longrightarrow 33$ b. $4 \longrightarrow 17$ c. $20 \longrightarrow 81$
d. $1000 \longrightarrow 4001$ e. $0 \longrightarrow 1$ f. $-4 \longrightarrow -15$