

① 321

```

public static int digitCount(int num){
    int count = 0;
    while(num != 0){
        num /= 10;
        count++;
    }
    return count;
}

```

721

$$\begin{array}{r}
 10 \overline{) 721} \\
 \underline{70} \phantom{0} \\
 21 \\
 \underline{20} \phantom{0} \\
 1 \\
 \underline{10} \phantom{0} \\
 0
 \end{array}$$

$$1000 \div 1220$$

$$\text{abcde} = \sqrt{a^6 + b^6 + c^6 + d^6 + e^6} = abcde$$

digit = 6

$$\begin{aligned}
 h &= 721 \\
 \text{digitCount} &= 3 \\
 \text{res} &= 0 + 7^3 + 2^3 + 1^3 \\
 \text{num} &= 721 \neq \text{res}
 \end{aligned}$$

```

public static String armstrongNumber(int n) {
    int digitCount = digitCount(n);
    int res = 0, num = n;
    while (num != 0) {
        int rem = num % 10;
        num /= 10;
        res += Math.pow(rem, digitCount);
    }
    return res == n ? "Yes" : "No";
}

```

1. gcd

$$\begin{array}{r}
 8 \overline{) 121} \\
 \underline{8} \phantom{0} \\
 41 \\
 \underline{40} \phantom{0} \\
 1
 \end{array}$$

(9, 6)

$$\begin{array}{r}
 4 \overline{) 24} \\
 \underline{4} \phantom{0} \\
 0
 \end{array}$$

$$\text{lcm}(a, b) = \frac{a \times b}{\text{gcd}}$$

$$= \frac{a}{\text{gcd}(a, b)}$$

$$\begin{array}{r}
 27 \overline{) 57} \\
 \underline{54} \phantom{0} \\
 3
 \end{array}$$

$$\begin{array}{r}
 27 \overline{) 81} \\
 \underline{54} \phantom{0} \\
 27 \\
 \underline{27} \phantom{0} \\
 0
 \end{array}$$

if a = 27  
if b = 57

while (b % a != 0)  
num = b / a;

a = a;  
a = num;

$$(27 \cdot 1) \cdot 1 = 0$$

$$\begin{aligned}
 f &= 8 \\
 h &= 10
 \end{aligned}$$

$$\begin{aligned}
 b &= 2 \\
 h &= 8
 \end{aligned}$$

$$\begin{aligned}
 b &= 3 \\
 h &= 9
 \end{aligned}$$

$$h_0 \cdot 6^0 + h_1 \cdot 6^1 + h_2 \cdot 6^2 + h_3 \cdot 6^3 + h_4 \cdot 6^4 + h_5 \cdot 6^5 + h_6 \cdot 6^6 + \dots$$