1️⃣ Grade Calculator

```
import java.util.Scanner;

public class GradeCalculator {
public static void main(String[] args) {
Scanner sc = new Scanner(System.in);
System.out.print("Enter your score (0-100): ");
int score = sc.nextInt();

if (score >= 90 && score <= 100)
System.out.println("Your grade is A.");
else if (score >= 80)
System.out.println("Your grade is B.");
else if (score >= 70)
System.out.println("Your grade is C.");
else if (score >= 60)
System.out.println("Your grade is D.");
else
System.out.println("Your grade is F.");
}
}
```

2️⃣ Largest of Three Numbers

```
import java.util.Scanner;

public class LargestNumber {
public static void main(String[] args) {
Scanner sc = new Scanner(System.in);
System.out.print("Enter first number: ");
int a = sc.nextInt();
System.out.print("Enter second number: ");
int b = sc.nextInt();
System.out.print("Enter third number: ");
int c = sc.nextInt();

int largest = a;
if (b > largest) largest = b;
if (c > largest) largest = c;

System.out.println("The largest number is " + largest);
}
}
```

3️⃣ Triangle Type

```
import java.util.Scanner;

public class TriangleType {
public static void main(String[] args) {
Scanner sc = new Scanner(System.in);
System.out.print("Enter side 1: ");
int a = sc.nextInt();
System.out.print("Enter side 2: ");
int b = sc.nextInt();
```

```
System.out.print("Enter side 3: ");
int c = sc.nextInt();

if (a == b && b == c)
System.out.println("The triangle is equilateral.");
else if (a == b || b == c || a == c)
System.out.println("The triangle is isosceles.");
else
System.out.println("The triangle is scalene.");
}
}
```

4️⃣ Password Strength Checker

```
import java.util.Scanner;

public class PasswordStrength {
public static void main(String[] args) {
Scanner sc = new Scanner(System.in);
System.out.print("Enter your password: ");
String password = sc.nextLine();

boolean hasUpper = false, hasLower = false, hasDigit = false, hasSpecial = false;

for (char ch : password.toCharArray()) {
if (Character.isUpperCase(ch)) hasUpper = true;
else if (Character.isLowerCase(ch)) hasLower = true;
else if (Character.isDigit(ch)) hasDigit = true;
else hasSpecial = true;
}

if (password.length() >= 8 && hasUpper && hasLower && hasDigit && hasSpecial)
System.out.println("Password strength: Strong.");
else if (password.length() >= 6 && hasUpper && hasLower && hasDigit)
System.out.println("Password strength: Medium.");
else
System.out.println("Password strength: Weak.");
}
}
```

5️⃣ Reverse a Number

```
import java.util.Scanner;

public class ReverseNumber {
public static void main(String[] args) {
Scanner sc = new Scanner(System.in);
System.out.print("Enter a number: ");
int num = sc.nextInt();
int reversed = 0;

while (num != 0) {
int digit = num % 10;
reversed = reversed * 10 + digit;
num /= 10;
}
```

```
System.out.println("The reversed number is " + reversed);
}
}
```

6️⃣ Prime Number Check

```
import java.util.Scanner;

public class PrimeCheck {
public static void main(String[] args) {
Scanner sc = new Scanner(System.in);
System.out.print("Enter a number: ");
int num = sc.nextInt();
boolean isPrime = true;

if (num <= 1)
isPrime = false;
else {
for (int i = 2; i <= Math.sqrt(num); i++) {
if (num % i == 0) {
isPrime = false;
break;
}
}
}

if (isPrime)
System.out.println(num + " is a prime number.");
else
System.out.println(num + " is not a prime number.");
}
}
```

7️⃣ Sum of Digits

```
import java.util.Scanner;

public class SumOfDigits {
public static void main(String[] args) {
Scanner sc = new Scanner(System.in);
System.out.print("Enter a number: ");
int num = sc.nextInt();
int sum = 0;

while (num != 0) {
sum += num % 10;
num /= 10;
}

System.out.println("The sum of the digits is " + sum);
}
}
```

8️⃣ Star Pattern

```
public class StarPattern {
```

```
public static void main(String[] args) {
for (int i = 1; i <= 5; i++) {
for (int j = 1; j <= i * 2 - 1; j++)
System.out.print("* ");
System.out.println();
}
for (int i = 4; i >= 1; i--) {
for (int j = 1; j <= i * 2 - 1; j++)
System.out.print("* ");
System.out.println();
}
}
}
```