```java
class Propagation {
    public static void main(String[] args) {
        ExceptionProp demo = new ExceptionProp();

        System.out.println("Program beginning");
        demo.level1();
        System.out.println("Program ending.");
    }
}

class ExceptionProp {

    public void level1() {
        System.out.println("Level 1 beginning.");

        try {
            level2();
        } catch (ArithmeticException e) {
            System.out.println("Arithmetic exception"
                                + "occurred!");
            e.printStackTrace();
        }

        System.out.println("Level 1 ending.");
    }

    public void level2() {
        System.out.println("Level 2 beginning.");
        level3();
        System.out.println("Level 2 ending.");
    }

    public void level3() {
        int num = 10, den = 0;

        System.out.println("Level 3 beginning.");
        int result = num / den;
        System.out.println("Level 3 ending.");
    }

}
```