Steps of how I solved the star problem

```
        *
      *   *   *
    *   *   *   *   *
*   *   *   *   *   *   *   *   *   *   *
  *   *   *   *   *   *   *   *   *
    *   *   *   *   *   *   *
  *   *   *   *   *   *   *   *   *
*   *   *   *   *   *   *   *   *   *   *
      *   *   *   *   *
        *   *   *
          *
```

```java
public class StarDemo {

    public static void main(String[] args) {

        int length = 5; // this is the length of a side of the star

        for (int i = 0; i < length; i++) {
            for (int j = i; j < (5+ length /2); j++) {
                System.out.print(" ");
            }
            for (int j = 0; j < (i+1); j++) {
                System.out.print("*");
            }
            System.out.println("");
        }
    }

}
```

```java
public class StarDemo {
    public static void main(String[] args) {

        int length = 5; // this is the length of a side of the star

        for (int i = 1; i <= length-(length/2); i++) {
            for (int j = i; j < (length); j++) {
                System.out.print(" ");
            }
            for (int j = 0; j < i+(i-1) ; j++) {
                System.out.print("* ");
            }
            System.out.println("");
        }
    }
```

```java
    }
```

```java
public class StarDemo {
    public static void main(String[] args) {

        int length = 5; // this is the length of a side of the star

        for (int i = 1; i <= length-(length/2); i++) {
            for (int j = i; j < (length+(length%2)); j++) {
                System.out.print("  ");
            }
            for (int j = 0; j < i+(i-1) ; j++) {
                System.out.print("* ");
            }
            System.out.println("");
        }

    }

}
```

```java
public class StarDemo {
    public static void main(String[] args) {

        int length = 5; // this is the length of a side of the star

        for (int i = 1; i <= length-(length/2); i++) {
            for (int j = i; j < (length+(length%2)); j++) {
                System.out.print("  ");
            }
            for (int j = 0; j < i+(i-1) ; j++) {
                System.out.print("* ");
            }
            System.out.println("");
        }

        for (int i = 0; i <= length-(length/2); i++) {
            for (int j = 0; j < i; j++) {
                System.out.print("  ");
            }
            for (int j = length+(length%2*2); j > 0; j--) {
                System.out.print("* ");
            }
            System.out.println("");
        }

    }

}
```

```java
package javaapplication10;

/**
 *
 * @author dilin
 */
public class StarDemo {
    public static void main(String[] args) {

        int length = 5; // this is the length of a side of the star

        for (int i = 1; i <= length-(length/2); i++) {
            for (int j = i; j < (length+(length%2)); j++) {
                System.out.print(" ");
            }
            for (int j = 0; j < i+(i-1) ; j++) {
                System.out.print("* ");
            }
            System.out.println("");
        }

        for (int i = 0; i < length-(length/2); i++) {
            for (int j = 0; j < i; j++) {
                System.out.print(" ");
            }
            for (int j = (length+(length%2)*2)-i; j > 0; j--) {
                System.out.print("* ");
            }
            System.out.println("");

        }
    }

}
```

```java
package javaapplication10;

/**
 *
 * @author dilin
 */
public class StarDemo {

    public static void main(String[] args) {

        int length = 5; // this is the length of a side of the star
```

```java
    //section 1
    for (int i = 1; i <= length - (length / 2); i++) {
        for (int j = i; j <= length; j++) {
            System.out.print("  ");
        }
        for (int j = 0; j < i + (i - 1); j++) {
            System.out.print("* ");
        }
        System.out.println("");
    }

    //section 2

    int side = length/2+1;

    for (int i = 0; i < length - (length / 2); i++) {
        for (int j = 0; j < i; j++) {
            System.out.print("  ");
        }
        for (int j = ((side * 2) + length) - i; j > 0; j--) {
            System.out.print("* ");
        }
        System.out.println("");
    }

    }
  }

}
```

```java
package javaapplication10;

/**
 *
 * @author dilin
 */
public class StarDemo {

    public static void main(String[] args) {

        int length = 5; // this is the length of a side of the star

        //section 1
        for (int i = 1; i <= length - (length / 2); i++) {
            for (int j = i; j <= length; j++) {
                System.out.print("  ");
            }
            for (int j = 0; j < i + (i - 1); j++) {
                System.out.print("* ");
            }
            System.out.println("");
```

```java
        }

        //section 2
        int side = length/2+1;

        for (int i = 0; i < length - (length / 2); i++) {
            for (int j = 0; j < i; j++) {
                System.out.print("  ");
            }
            for (int j = ((side * 2) + length) - i*2; j > 0; j--) {
                System.out.print("* ");
            }
            System.out.println("");

        }
    }

}
```

```java
package javaapplication10;

/**
 *
 * @author dilin
 */
public class StarDemo {

    public static void main(String[] args) {

        int length = 5; // this is the length of a side of the star

        //section 1
        for (int i = 1; i <= length - (length / 2); i++) {
            for (int j = i; j <= length; j++) {
                System.out.print("  ");
            }
            for (int j = 0; j < i + (i - 1); j++) {
                System.out.print("* ");
            }
            System.out.println("");
        }

        //section 2
        int side = length / 2 + 1;

        for (int i = 0; i < length - (length / 2); i++) {
            for (int j = 0; j < i; j++) {
                System.out.print("  ");
            }
            for (int j = ((side * 2) + length) - i * 2; j > 0; j--) {
```

```java
            System.out.print("* ");
          }
          System.out.println("");

        }

        //section 3
        for (int i = length / 2 - 1, k=1; i >= 0; i--,k++) {
          for (int j = i; j > 0; j--) {
            System.out.print("  ");
          }
          for (int j = length*(k+1)-k*k; j >0; j--) {
            System.out.print("* ");
          }
          System.out.println("");
        }
    }

}
```

```java
package javaapplication10;

/**
 *
 * @author dilin
 */
public class StarDemo {

    public static void main(String[] args) {

        int length = 5; // this is the length of a side of the star

        //section 1
        for (int i = 1; i <= length - (length / 2); i++) {
          for (int j = i; j <= length; j++) {
            System.out.print("  ");
          }
          for (int j = 0; j < i + (i - 1); j++) {
            System.out.print("* ");
          }
          System.out.println("");
        }

        //section 2
        int side = length / 2 + 1;

        for (int i = 0; i < length - (length / 2); i++) {
          for (int j = 0; j < i; j++) {
            System.out.print("  ");
```

```java
        }
        for (int j = ((side * 2) + length) - i * 2; j > 0; j--) {
          System.out.print("* ");
        }
        System.out.println("");

      }

      //section 3
      for (int i = length / 2 - 1, k=1; i >= 0; i--,k++) {
        for (int j = i; j > 0; j--) {
          System.out.print(" ");
        }
        for (int j = length*(k+1)-k*k; j >0; j--) {
          System.out.print("* ");
        }
        System.out.println("");
      }

      //section 4
      for (int i = length - (length / 2); i >0 ; i--) {
        for (int j = length; j >=i; j--) {
          System.out.print("  ");
        }
        for (int j = i + (i-1); j > 0; j--) {
          System.out.print("* ");
        }
        System.out.println("");
      }
    }

  }
```