

```
public class Recur {
    public static int f(int x) {
        if (x <= 1) {
            return 1;
        }
        return 2 * f(x - 2) + 2;
    }
}
```

```
public static void main(String []args) {
    System.out.println(f(8));
}
```

$$\begin{aligned}
 46 &= f(8) = 2 \cancel{f(6)} + 2 \\
 22 &= f(6) = 2 \cancel{f(4)} + 2 \\
 10 &= f(4) = 2 \cancel{f(2)} + 2 \\
 4 &= f(2) = 2 \cancel{f(0)} + 2 \\
 1 &= f(0)
 \end{aligned}$$

Handwritten annotations: Red checkmarks above $f(8)$ and $f(0)$. Red boxes around $f(6)$ and $f(0)$ with red 'X' marks. Blue arrows pointing from the recursive call in the code to the corresponding terms in the equations.