Your spaceship is carrying the last few people from Earth towards a distant planet that will become the new home of the Earth civilization. You've just gotten a distress signal, and since nothing could possibly go wrong, you've decided to investigate the source of the signal.

Unfortunately, it turns out that the signal was sent by a hostile alien army. Your spaceship is now facing n alien spacecrafts, and it's your duty to destroy them! Luckily, you have an amazing defense system that destroys half of the hostile army at a time by vaporizing all the enemy spacecrafts that are at odd positions.

The system will keep destroying alien ships until there's only one left. What number will this spacecraft have?

**Example**

For spacecrafts = 10, the output should be  
surviveIt(spacecrafts) = 8.

Initially, there are 10 spacecrafts. After your first attack, only half of them will survive: 2, 4, 6, 8and 10.  
After your second attack, only 2 spacecrafts will remain: 4 and 8.  
Finally, spacecraft 4 will be vaporized, so spacecraft 8 will be the only one left.

**Output/Input**

* **[time limit] 3000ms (cs)**
* **[input] integer spacecrafts**

*Guaranteed constraints:*  
1 ≤ spacecrafts ≤ 109.

* **[output] integer**

The number of the last spacecraft to survive your attacks.

<https://codefights.com/challenge/Bw63XoZg24SpfJtcR>

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

namespace ConsoleApplication1

{

class Program

{

static int surviveIt(int spacecrafts)

{

int prod = 1;

for (int i = 0; prod \*2 <=spacecrafts ; i++)

{

prod \*= 2;

}

return prod;

}

static void Main(string[] args)

{

Console.WriteLine(surviveIt(10));

Console.ReadLine();

}

}

}