

## The JETS Challenge

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### Challenge 98 – The Bald Eagle Challenge

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**Problem:**

Rachel Carson's 1962 book, *Silent Spring*, analyzed the effects of DDT, an effective insecticide against the mosquitoes that carry malaria, on the thinning of eggshells in birds of prey. It is often credited with igniting the world's environmental movement. The number of nesting pairs of bald eagles in the lower 48 states has increased from a low of 417 to 6,471 pairs in 2000. From 1990 to 2000, the birdwatchers at Hawk Mountain, PA observed an increase of 5.9 percent in sightings of migrating bald eagles.

**If that rate of change remained constant each year, find the number of nesting pairs we should have today (calculate it for the end of 2007).**

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**Solution:**

Year	Nesting Pairs (beginning with 6471 pairs and increasing 5.9% annually)
1990-2000	6,471 x 1.059
2000-2001	6852.79
2001-2002	7257.10
2002-2003	7685.27
2003-2004	8138.70
2004-2005	8618.89
2005-2006	9127.40
2006-2007	9665.92

Answer = 9,666 nesting pairs