

# Miracle Mike



**Task 1 Directions:** Read the scenario and make your prediction.

Miracle Mike plays for the California Hoops basketball team. After the Hoops won the NBA championship, the manager offers to pay Miracle Mike a million dollars at the start of each year for the next twenty-five years. At the same time a rookie on the team is given \$1 at the start of the first year, \$2 at the start of the second year, \$4 at the start of the third year, \$8 at the start of the fourth year, and so on, for the next twenty-five years.

**Prediction Question:** At the **end of 25 years** who will have received **more money** throughout his career? Explain.

**Task 2 Directions:** Partner A will fill in the salaries for Miracle Mike's yearly ( $y$ ) as well as cumulative ( $C$ ) (their total earnings year after year). Partner A will go to task 4 when finished. Partner B, using a calculator, will fill in the salaries for The Rookie's yearly ( $y$ ) as well as cumulative ( $C$ ) (their total earnings year after year).

# of years ( $n$ )	Miracle Mike ( $y$ )	Miracle Mike ( $C$ )	Rookie ( $y$ )	Rookie ( $C$ )
1	1,000,000	1,000,000	1	1
2	1,000,000	2,000,000	2	3
3	1,000,000	3,000,000	4	7
4	1,000,000	4,000,000	8	15
5	1,000,000	5,000,000	16	31
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**Task 3 Directions:** Complete the following questions with a partner.

1) At the end of 25 years, Miracle Mike has made \$\_\_\_\_\_.

At the end of 25 years, The Rookie has made \$\_\_\_\_\_.

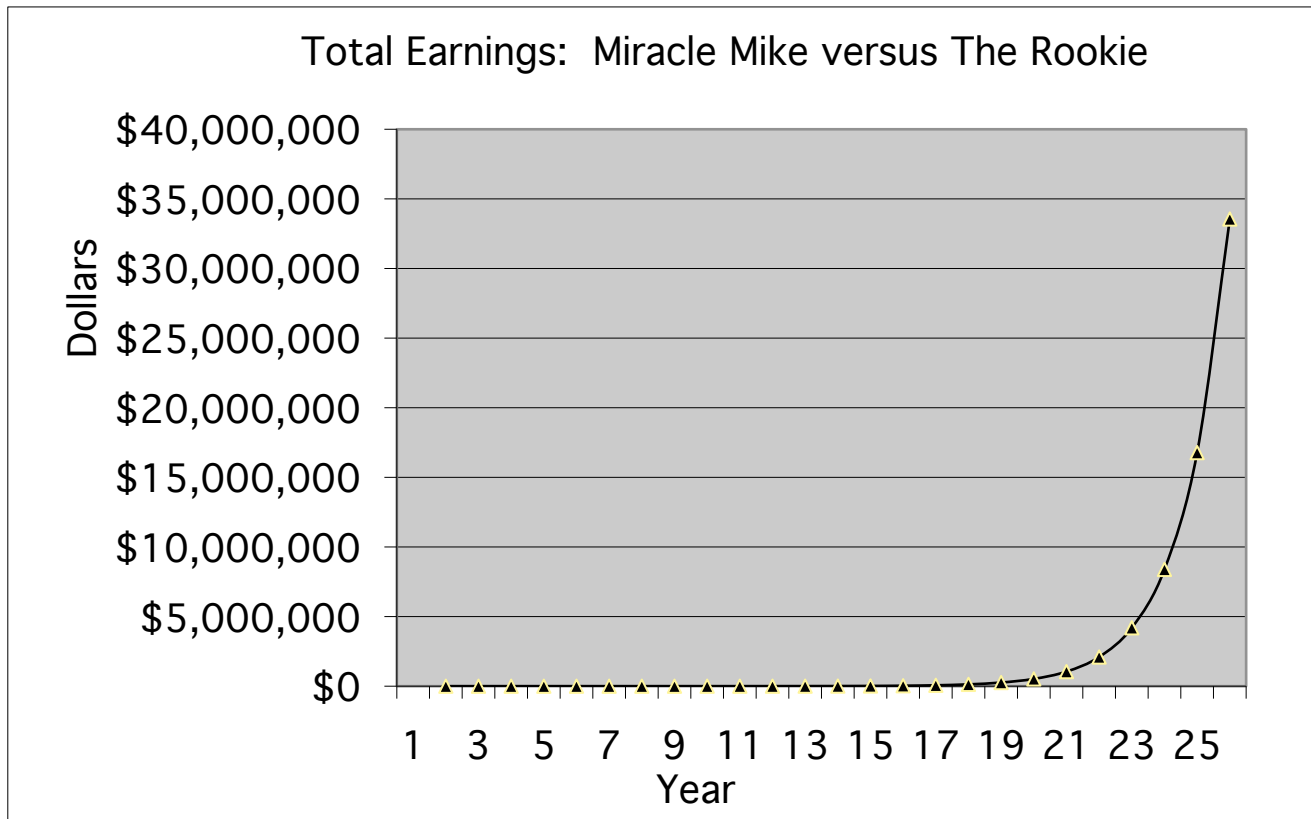
2) Who will make more money over the course of their career? Why?

3) Let's look back to our Compare & Contrast page.

What is **similar** about the problems on the left (i.e.- **1a, 2a, 3a** etc) and **Miracle Mike's** columns in the table? Explain.

What is **similar** about the problems on the right (i.e.- **1b, 2b, 3b** etc) and **The Rookie's** columns in the table? Explain.

**Task 4 Directions:** Using a colored pencil & your chart from task 2, graph the total earning for Miracle Mike below. The Rookie's total earning are on the graph already represented by the black line.



4) **Compare the two lines** on the graph. What do you notice? How can you explain the difference?

5) Why does The Rookie's line go up so **steeply** starting around 20 years?