Proving His Love

Erica wants to give her father something special for Valentine's Day. Her father likes to collect coins and really likes gold coins. The problem is that Erica doesn't have enough money to buy gold coins for her father. Erica's grandfather wants to help her but doesn't want to just "give" her the coins. She must earn them by thinking. Grandpa shows her 5 bags of coins. Each bag contains 10 coins. However, only 1 bag contains real gold coins! The other bags contain fake coins that were covered with a thin layer of gold. Each real gold coin weighs 9 grams while the fake coins weigh 10 grams each. Grandpa shows Erica a digital scale. He promises to give her the real gold coins if she can figure out which bag contains the real gold coins. He only has one rule. She can only use the scale one time. How can Erica determine which of the five bags contains the real gold coins? Remember, Erica can only use the digital scale one time (one weighing). Hint: line the bags up.

Make sure you include the answer and an explanation as to how you determined the correct response. Be specific. To receive credit, you must include an explanation. Happy prospecting!