

Monsters & Magic Math Quest

Remainders and Modular Logic — Review Practice

Name: _____ Date: _____

Q1. The Dragon's Treasure Chests

Scorch the dragon has 75 gold coins. She is packing them into treasure chests that hold exactly 9 coins each. How many coins will be left over after she fills as many chests as she can?

Q2. The Unicorn Festival

Today is Monday. The Great Unicorn Festival is exactly 52 days from today. What day of the week will the festival be on?

Q3. The Monster's Scales

Grumble the monster has scales that repeat in a pattern down his back: Green, Purple, Orange, Black, Silver, Teal. If the pattern keeps repeating, what color will the 50th scale be?

Q4. The Wizard's Growing Spell

A wizard's spell gets 7 times stronger every day. On day 1 its power is 7, on day 2 it's $7 \times 7 = 49$, on day 3 it's $7 \times 7 \times 7 = 343$, and so on. On day 18, the power is 7 multiplied by itself 18 times. What is the very last digit of that enormous number?

Q5. The Troll's Pet Bats

A troll is counting his pet bats. When he puts them in groups of 3, there are 2 bats left over. When he puts them in groups of 5, there are 3 bats left over. What is the smallest number of bats the troll could have?