**Lower Elementary:**

*Question:* A gold coin is worth the same amount as 17 silver coins or 493 copper coins. Put the following in order from least valuable to most valuable: a book that costs 7 silver coins, a magical wand that costs 7 gold coins, and a chocolate frog that costs 7 copper coins.

**Upper Elementary:**

*Question:* A train leaves London for a small town in Scotland at 11:00 am. The train takes a 540-mile route and reaches its destination at 5:00 pm. What was the train’s average speed during its journey to Scotland?

**Middle School:**

*Question:* A feather is floating 76.2 centimeters off the ground. How many feet off the ground is the feather?

**Algebra and Up:**

*Question:* Four teams have just finished a year-long competition. The Serpents scored 32 points more than 1.25 times the number of points scored by the Badgers. The Badgers scored 3 less than 5/6 the number of points scored by the Eagles. The Serpents, Eagles, and Badgers scored a total of 1,250 points between the three of them. The Lions won the competition by 10 points. How many points did the Lions score?

**Lower Elementary:**

*Question:* A gold coin is worth the same amount as 17 silver coins or 493 copper coins. Put the following in order from least valuable to most valuable: a book that costs 7 silver coins, a magical wand that costs 7 gold coins, and a chocolate frog that costs 7 copper coins.

*Answer:* chocolate frog, book, wand

*Solution:* We can tell that each silver coin is worth less than a gold coin because it takes more of them to have the same value as a gold coin. The copper coins are worth even less because it takes even more of them. Since each object costs the same number of coins but the coins are worth different amounts, the object that is valued in gold coins is worth the most, the object valued in silver coins is in the middle, and the object valued in copper coins is worth the least.

**Upper Elementary:**

*Question:* A train leaves London for a small town in Scotland at 11:00 am. The train takes a 540-mile route and reaches its destination at 5:00 pm. What was the train’s average speed during its journey to Scotland?

*Answer:* 90 miles per hour

*Solution:* Since 11:00 am to 5:00 pm is 6 hours, the train takes 6 hours to get from London to the small town in Scotland. If we divide 540 miles by 6 hours, we get 90 miles per hour. So, the train’s average speed during its journey is 90 miles per hour.

**Middle School:**

*Question:* A feather is floating 76.2 centimeters off the ground. How many feet off the ground is the feather?

*Answer:* 2.5 feet

*Solution:* First, we convert centimeters to inches. There are 2.54 centimeters per inch, so 76.2 centimeters is 76.2 ÷ 2.54 = 30 inches. There are 12 inches in a foot, so 30 inches is 30 ÷ 12 = 2.5 feet.

**Algebra and Up:**

*Question:* Four teams have just finished a year-long competition. The Serpents scored 32 points more than 1.25 times the number of points scored by the Badgers. The Badgers scored 3 less than 5/6 the number of points scored by the Eagles. The Serpents, Eagles, and Badgers scored a total of 1,250 points between the three of them. The Lions won the competition by 10 points. How many points did the Lions score?

*Answer:* 482 points

*Solution:* First, we set up a system of equations for the points scored by the Serpents, the Badgers, and the Eagles:

***S*** = 1.25***B*** + 32

***B*** = 5/6***E*** – 3

***S*** + ***B*** + ***E*** = 1,250

When we solve this system, we get ***S*** = 472, ***B*** = 352, and ***E*** = 426. Since ***S*** is the greatest value so far and we know that the Lions beat that score by 10 points, the Lions must have scored 472 + 10 = 482 points.