**Lower Elementary:**

*Question:* Paul hung 13 ornaments on the Christmas tree. Quinn hung 19 ornaments on the Christmas tree. Reagan hung 17 ornaments on the Christmas tree. How many ornaments are on the Christmas tree?

**Upper Elementary:**

*Question:* Danielle made cookies to leave for Santa. Half of the cookies she made are chocolate chip, one third of the cookies are oatmeal raisin, and the remaining 3 cookies are peanut butter. How many total cookies did Danielle leave for Santa?

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**Middle School:**

*Question:* Benji is driving to his grandparents’ house to celebrate Christmas Eve. He traveled 60 miles to get to the house. Because of traffic, Benji’s average speed was 45 miles per hour. How long did it take Benji to get to his grandparents’ house in minutes?

**Algebra and Up:**

*Question:* Penelope is wrapping presents. She has a cube-shaped gift that has a volume of 512 cubic inches. If she wants to use an exact amount of wrapping paper to wrap the gift, how much wrapping paper does she need to wrap the gift?

**Lower Elementary:**

*Question:* Paul hung 13 ornaments on the Christmas tree. Quinn hung 19 ornaments on the Christmas tree. Reagan hung 17 ornaments on the Christmas tree. How many ornaments are on the Christmas tree?

*Answer:* 49 ornaments

*Solution:* To find the total number of ornaments hanging on the tree, we add the number of ornaments each person put on the tree. So, we add 13 + 19 + 17. It would be easier to add 13 and 17 first since the ones place values add to 10. 13 + 17 = 30, and 30 + 19 = 49, so there are 49 ornaments on the tree.

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**Upper Elementary:**

*Question:* Danielle made cookies to leave for Santa. Half of the cookies she made are chocolate chip, one third of the cookies are oatmeal raisin, and the remaining 3 cookies are peanut butter. How many total cookies did Danielle leave for Santa?

*Answer:* 18 cookies

*Solution:* First we need to find the fractional part that the peanut butter cookies represent. 1 – 1/2 – 1/3 = 1 – 3/6 – 2/6 = 1/6. So the peanut butter cookies represent 1/6 of the cookies. Since there are 3 peanut butter cookies, there is a total of 3 × 6 = 18 cookies.

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**Middle School:**

*Question:* Benji is driving to his grandparents’ house to celebrate Christmas Eve. He traveled 60 miles to get to the house. Because of traffic, Benji’s average speed was 45 miles per hour. How long did it take Benji to get to his grandparents’ house in minutes?

*Answer:* 80 minutes

*Solution:* Benji’s grandparents live 60 miles away and he travels 45 miles per hour. After 1 hour, Benji will have traveled 45 miles, so he still needs to travel 15 more miles. 15 is 1/3 of 45, so it will take Benji 1 1/3 hours to get to his grand parents’ house. There are 60 minutes in an hour, so it took Benji 1 1/3 × 60 = 80 minutes.

**Algebra and Up:**

*Question:* Penelope is wrapping presents. She has a cube-shaped gift that has a volume of 512 cubic inches. If she wants to use an exact amount of wrapping paper to wrap the gift, how much wrapping paper does she need to wrap the gift?

*Answer:* 384 square inches of wrapping paper

*Solution:* The volume of a cube is the side length cubed. To find the side length, we take the cube root of the volume. The cube root of 512 = 8, so the side lengths are 8 inches. The surface area of the cube is the area of one face times the number of faces. The area of one face is 8 × 8 = 64 square inches. A cube has 6 faces, so the surface area of the box is 64 × 6 = 384 square inches.