**Lower Elementary:**

*Question:* Tori has reading homework that is 19 pages long. The homework is printed front-and-back on sheets of paper. How many sheets of paper are needed for the whole reading assignment?

**Upper Elementary:**

*Question:* Sebastian completed 4 math assignments, 5 writing assignments, 7 reading assignments, 3 history assignments, and 1 science assignment last week. Fill in the pie chart to the right with Sebastian’s homework assignments.

**Middle School:**

*Question:* Lisa needs to memorize the locations of all 54 countries in Africa for a geography test that will be 30 days from now. She memorizes 7 countries every 3 days. Every 2 days, she forgets a country and needs to re-memorize it. Will she have enough time to memorize all of the countries in Africa for her geography test?

**Algebra and Up:**

*Question:* Logan has answered 0.8 times as many math questions as Spanish questions, and he’s answered 5 more English questions than Spanish questions. If Logan has answered 33 questions in total, how many math questions has Logan answered?

**Lower Elementary:**

*Question:* Tori has reading homework that is 19 pages long. The homework is printed front-and-back on sheets of paper. How many sheets of paper are needed for the whole reading assignment?

*Answer:* 10 sheets of paper

*Solution:* Since 2 pages can go on each sheet of paper, that means that the first 18 sheets of paper can fit on half of 18 = 9 sheets of paper. The 19th page goes on a 10th sheet of paper. So, 10 pieces of paper are needed for the whole reading assignment.

****

**Upper Elementary:**

*Question:* Sebastian completed 4 math assignments, 5 writing assignments, 7 reading assignments, 3 history assignments, and 1 science assignment last week. Fill in the pie chart to the right with Sebastian’s homework assignments.

*Solution:* Answers vary, but the math assignments should take up 2 segments on the pie chart, writing should take 2½, reading should take 3½, history should take 1½, and science should take ½.

**Middle School:**

*Question:* Lisa needs to memorize the locations of all 54 countries in Africa for a geography test that will be 30 days from now. She memorizes 7 countries every 3 days. Every 2 days, she forgets a country and needs to re-memorize it. Will she have enough time to memorize all of the countries in Africa for her geography test?

*Answer:* Yes

*Solution:* Since there are 10 3-day periods in 30 days, Lisa can memorize the location of a country a total of 7 × 10 = 70 times. That means she has time to forget and relearn 70 – 54 = 16 of them. If she forgets 1 every 2 days, that means she forgets 30 ÷ 2 = 15 of them, and since 15 is less than 16, she will have time to re-memorize them all.

**Algebra and Up:**

*Question:* Logan has answered 0.8 times as many math questions as Spanish questions, and he’s answered 5 more English questions than Spanish questions. If Logan has answered 33 questions in total, how many math questions has Logan answered?

*Answer:* 8 math questions

*Solution:* We can set up and solve the following system of equations to solve this problem:

***M*** = 0.8***S***

***E*** = ***S*** + 5

***M*** + ***S*** + ***E*** = 33

Next, we plug the values of ***M*** and ***E*** into the third equation because they’re both already in terms of ***S***. Now we have an equation with one variable—***S***. We can solve it to find that ***S*** = 10, so ***M*** must be 8. Logan has answered 8 math questions.