**Lower Elementary:**

*Question:* Willow spends 11/2 hours per day in the school library. How many hours does Willow spend in the library from Monday through Friday?

**Upper Elementary:**

*Question:* Xander has homework from 5 different classes: English, History, Math, Science, and Spanish. Each homework assignment is 5 pages long. Each page has 5 questions. Each question takes 5 minutes to answer. How long will it take Xander to finish his homework? Give your answer in hours and minutes.

**Middle School:**

*Question:* Anya works at a magic shop where she makes $12.00 per hour. She’s saving up her money to buy a boombox that costs $60.00. She already has $30.00 saved. Write an inequality to represent the number of hours Anya can work so that she’ll have enough money to buy the boombox.

**Algebra and Up:**

*Question:* Buffy sees a vampire 1/3 of a kilometre in the distance and chases after it. The vampire runs away at a speed of 36 kilometres per hour. Buffy catches up with the vampire in 5 minutes. What is Buffy’s speed?

**Lower Elementary:**

*Question:* Willow spends 11/2 hours per day in the school library. How many hours does Willow spend in the library from Monday through Friday?

*Answer:* 71/2 hours

*Solution:* There are 5 days from Monday through Friday. So, we can solve this problem by counting by 11/2, 5 times: 11/2, 3, 41/2, 6, 71/2. Willow spends 71/2 hours in the library from Monday through Friday.

**Upper Elementary:**

*Question:* Xander has homework from 5 different classes: English, History, Math, Science, and Spanish. Each homework assignment is 5 pages long. Each page has 5 questions. Each question takes 5 minutes to answer. How long will it take Xander to finish his homework? Give your answer in hours and minutes.

*Answer:* 10 hours and 25 minutes

*Solution:* Xander has 5 × 5 = 25 pages of homework. Since there are 5 questions per page, he has 25 × 5 = 125 questions to answer. Since each question takes 5 minutes, his homework will take him 125 × 5 = 625 minutes in total. Since an hour is 60 minutes, we divide 625 by 60 and get 10 hours and 25 minutes.

**Middle School:**

*Question:* Anya works at a magic shop where she makes $12.00 per hour. She’s saving up her money to buy a boombox that costs $60.00. She already has $30.00 saved. Write an inequality to represent the number of hours Anya can work so that she’ll have enough money to buy the boombox.

*Answer:*  ***x*** ≥ 21/2 hours

*Solution:* Anya needs $60.00 – $30.00 = $30.00 more to buy the boombox. She makes $12.00 per hour, so it’ll take her $30.00 ÷ $12.00 = 21/2 hours to earn enough money to buy the boombox. Since Anya will have enough money if she works 21/2 or more hours, our inequality is ***x*** ≥ 21/2 hours.

**Algebra and Up:**

*Question:* Buffy sees a vampire 1/3 of a kilometre in the distance and chases after it. The vampire runs away at a speed of 36 kilometres per hour. Buffy catches up with the vampire in 5 minutes. What is Buffy’s speed?

*Answer:* 40 kilometres per hour

*Solution:* The distance Buffy must run to catch up with the vampire is equal to the distance the vampire can run in the same amount of time plus its 1/3-of-a-kilometre head start. We know that it takes 5 minutes (or 1/12 of an hour) for her to catch up, so we can represent the scenario algebraically with this equation:

***B*** × 1/12 = 36 × 1/12 + 1/3

When we solve for ***B***, we find that Buffy’s speed is 40 kilometres per hour.