**Lower Elementary:**

*Question:* Peter’s birthdate is January 3, 1996. Hannah’s birthdate is October 30, 2008. How old will each of them be on August 25, 2017?

**Upper Elementary:**

*Question:* Grace has 1,000 points saved up on an app. She can trade 200 for a $10 gift card. If Grace wants to use her points to get enough gift cards to buy a pair of boots that cost $75, how many more points does she need?

**Middle School:**

*Question:*  Isaac can read 50 pages in an hour. Wyatt can read 90 pages in an hour and a half. How much faster can Wyatt read a 300 page book than Isaac?

**Algebra and Up:**

*Question:* If ***x*** is an integer, 3***x*** + 7 < 16, and 2***x*** – 5 ≥ –9, what are the possible values of ***x***?

**Lower Elementary:**

*Question:* Peter’s birthdate is January 3, 1996. Hannah’s birthdate is October 30, 2008. How old will each of them be on August 25, 2017?

*Answer:* Peter will be 21 years old, and Hannah will be 8 years old.

*Solution:* Since Peter’s birthday will already have happened this year, he will be 2017 – 1996 = 21 years old. Hannah’s birthday hasn’t happened yet, so her last birthday was in 2016. So, Hannah will be 2016 – 2008 = 8 years old.

**Upper Elementary:**

*Question:* Grace has 1,000 points saved up on an app. She can trade 200 for a $10 gift card. If Grace wants to use her points to get enough gift cards to buy a pair of boots that cost $75, how many more points does she need?

*Answer:* 600 points

*Solution:* Grace needs 8 gift cards in total to have enough money to buy the pair of boots. She has enough points for 1,000 ÷ 200 = 5 gift cards, so she needs 3 more. To get 3 more gift cards, she needs 3 × 200 = 600 points.

**Middle School:**

*Question:*  Isaac can read 50 pages in an hour. Wyatt can read 90 pages in an hour and a half. How much faster can Wyatt read a 300 page book than Isaac?

*Answer:* 1 Hour

*Solution:* Isaac’s 50 pages per hour go into 300 pages 6 times (300 ÷ 50 = 6), so Isaac can finish the book in 6 hours. Since an hour and a half is 90 minutes, that means that Wyatt can read 1 page per minute, or 60 pages per hour. Wyatt’s 60 pages per hour go into 300 pages 5 times (300 ÷ 60 = 5). So, Wyatt can read a 300 page book an hour faster than Isaac.

**Algebra and Up:**

*Question:* If ***x*** is an integer, 3***x*** + 7 < 16, and 2***x*** – 5 ≥ –9, what are the possible values of ***x***?

*Answer:* –2, –1, 0, 1, and 2

*Solution:* When we solve the first inequality, we get 3***x*** + 7 < 16, 3***x*** < 9, ***x*** < 3. When we solve the second, we get 2***x*** – 5 ≥ –9, 2***x*** ≥ –4, ***x*** ≥ –2. So, ***x*** can be an integer that’s greater than or equal to –2 and less than 3. That means ***x*** can be –2, –1, 0, 1, and 2.