**Lower Elementary:**

*Question:* Sam needs enough soda for his 27 party guests. If soda comes in packs of 6, how many packs will Sam need to buy in order for each guest to have 1 soda?

**Upper Elementary:**

*Question:* Siri spent a quarter of her babysitting money on a new pair of sunglasses. If she makes $9.50 per hour and babysat for 8 hours, how much money did she have left after buying the sunglasses?

**Middle School:**

*Question:*  Ella’s summer drama camp has a 5 to 7 ratio of boys to girls. If there are a total of 84 students in her camp, how many girls are there?

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**Algebra and Up:**

*Question:* The speed of Armaan’s new boat in still water is 30 km/h. It takes him 6 hours to go to his friend’s house upstream from his boat dock and only 4 hours to come back to his dock going downstream. How fast is the current?

**Lower Elementary:**

*Question:* Sam needs enough soda for his 27 party guests. If soda comes in packs of 6, how many packs will Sam need to buy in order for each guest to have 1 soda?

*Answer:*  5 packs of soda

*Solution:* Let’s count up by 6s to find how many packs of soda Sam needs to buy, 6, 12, 18, 24, 30. Sam needs to buy 5 packs of soda to have enough for all 27 party guests.

**Upper Elementary:**

*Question:* Siri spent a quarter of her babysitting money on a new pair of sunglasses. If she makes $9.50 per hour and babysat for 8 hours, how much money did she have left after buying the sunglasses?

*Answer:* $57.00

*Solution:* Siri worked for 8 hours earning $9.50/hour for a total of 8 × $9.50 = $76.00. She spent a quarter of that money, which is half of half of 76 = half of 38 = $19.00 on sunglasses. Siri was left with $76.00 − $19.00 = $57.00 after buying sunglasses

**Middle School:**

*Question:*  Ella’s summer drama camp has a 5 to 7 ratio of boys to girls. If there are a total of 84 students in her camp, how many girls are there?

*Answer:* 49 girls

*Solution:* We can set up a proportion to solve this. A ratio of 5 boys to 7 girls also means there are 7 girls for every 12 students. 7 girls/ 12 students = x girls/ 84 students. Solving this we find there are 49 girls signed up for summer drama camp.

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**Algebra and Up:**

*Question:* The speed of Armaan’s new boat in still water is 30 km/h. It takes him 6 hours to go to his friend’s house upstream from his boat dock and only 4 hours to come back to his dock going downstream. How fast is the current?

*Answer:* 6 km/h

*Solution:* We can use the formula, d = rt. Armaan traveled the same distance upstream and downstream so we can set the distance upstream equal to the distance downstream. Letting x = speed of the current, the rate is the speed of the boat ± the speed of the current.

upstream: d = (30 − x)6

downstream: d = (30 + x)4

(30 − x)6 = (30 + x)4

180 − 6x = 120 + 4x

x = 6 km/h