**Lower Elementary:**

*Question:* Kyle is paying for a dinner. The entire dinner came to $33.50. Kyle paid with a $25 gift card and a $20 bill. How much change will Kyle get back?

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**Upper Elementary:**

*Question:* Annie is cooking breakfast. She starts with a full carton of 18 eggs and fries two thirds of them, but she burns a quarter of the eggs she fries. How many eggs does Annie fry successfully?



**Middle School:**

*Question:* An order of bacon and an order of pancakes cost $11.00 altogether. An order of pancakes and a cold-pressed juice cost $10 altogether. A cold-pressed juice and an order of bacon cost $9 altogether. If all menu items cost whole-dollar amounts, how much does a double-order of pancakes cost?

**Secondary School:**

*Question:* Five people sit down for a fancy dinner. Each of their napkins is folded into a different origami animal—a swan, a frog, a rabbit, a fish, a pig, or a turtle. The person at the head of the table always gets the rabbit. How many different ways can the napkins be arranged around the table?

**Lower Elementary:**

*Question:* Kyle is paying for a dinner. The entire dinner came to $33.50. Kyle paid with a $25 gift card and a $20 bill. How much change will Kyle get back?

*Answer:* $11.50

*Solution:* With a $25 gift card and a $20 bill, Kyle is paying $25 + $20 = $45 for the dinner. Since the dinner cost $33.50, the change Kyle will receive is $45 – $33.50 = $11.50.

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**Upper Elementary:**

*Question:* Annie is cooking breakfast. She starts with a full carton of 18 eggs and fries two thirds of them, but she burns a quarter of the eggs she fries. How many eggs does Annie fry successfully?

*Answer:* 9 eggs

*Solution:* Annie fries ⅔ × 18 = 12 eggs. If Annie burns a quarter of those, that means she burns ¼ × 12 = 3 eggs. Since she fries a total of 12 eggs, Annie successfully fries 12 – 3 = 9 eggs without burning them.



**Middle School:**

*Question:* An order of bacon and an order of pancakes cost $11.00 altogether. An order of pancakes and a cold-pressed juice cost $10 altogether. A cold-pressed juice and an order of bacon cost $9 altogether. If all menu items cost whole-dollar amounts, how much does a double-order of pancakes cost?

*Answer:* $12

*Solution:* The juice and pancakes together cost $1 more than the juice and bacon, so we know that the pancakes must cost $1 more than the bacon. The only whole-dollar amounts with a difference of $1 that add up to $11 for bacon and pancakes are $5 and $6 respectively. So, a double-order of pancakes costs $6 × 2 = $12.

**Secondary School:**

*Question:* Five people sit down for a fancy dinner. Each of their napkins is folded into a different origami animal—a swan, a frog, a rabbit, a fish, a pig, or a turtle. The person at the head of the table always gets the rabbit. How many different ways can the napkins be arranged around the table?

*Answer:* 120

*Solution:* Because the rabbit must be at the head of the table, we only need to find the number of possible animals for the other 4 place settings. There are 5 options for the first place setting’s animal, followed by 4 remaining options for the next place setting, 3 for the third place setting, and 2 for the fourth. To find the number of possible combinations, we multiply the number of possibilities for each place setting together. So, there are 5 × 4 × 3 × 2 = 120 possible arrangements.