**Lower Elementary:**

*Question:* Charlotte and Chuck have tickets to a movie that starts at 7:30 pm. If it’s 6:42 pm now, then how much time do Charlotte and Chuck have to get to the movie theater before the show starts?

**Upper Elementary:**

*Question:* Dillon wants to buy a model airplane that costs $34.00. She has a $5.00 bill and a 75% off coupon. How much more money does Dillon need to get the model airplane?

**Middle School:**

*Question:* For the first 5 days of the week, Eddie put 3 photos on social media per day. How many does he need to post on the weekend to have an average of 5 photos posted per day for the whole week?

**Algebra and Up:**

*Question:* A hardware store receives an order for 10 litres of paint with 40% blue pigment. The hardware store already has mixtures of 20% blue pigment and 50% blue pigment. How many litres of each can the hardware store reuse to mix 10 litres of 40% blue pigment?

**Lower Elementary:**

*Question:* Charlotte and Chuck have tickets to a movie that starts at 7:30 pm. If it’s 6:42 pm now, then how much time do Charlotte and Chuck have to get to the movie theater before the show starts?

*Answer:* 48 minutes

*Solution:* We can solve this problem by adding the minutes up to 7:30 pm. There are 18 minutes until 7:00 because 42 + 18 = 60 minutes, which is an hour. There are 30 minutes from 7:00 until 7:30. So, Charlotte and Chuck have 18 + 30 = 48 minutes until the movie starts.

**Upper Elementary:**

*Question:* Dillon wants to buy a model airplane that costs $34.00. She has a $5.00 bill and a 75% off coupon. How much more money does Dillon need to get the model airplane?

*Answer:* $3.50

*Solution:* Since the coupon is for 75% off, the model airplane costs 25% of its original cost, which is half of a half of $34.00. Half of $34.00 is $17.00, and half of that is $8.50. If Dillon has $5.00, she needs $8.50 – $5.00 = $3.50 more to buy the model airplane.

**Middle School:**

*Question:* For the first 5 days of the week, Eddie put 3 photos on social media per day. How many does he need to post on the weekend to have an average of 5 photos posted per day for the whole week?

*Answer:* 20 more photos

*Solution:* If Eddie posts 3 photos per day for 5 days, then he posts 3 × 5 = 15 photos. In order for Eddie’s average to be 5 photos per day for a week, he’ll need to post a total of 5 × 7 = 35 photos. So, he needs to post 35 – 15 = 20 more photos over the weekend to bring his average to 5 photos per day.

**Algebra and Up:**

*Question:* A hardware store receives an order for 10 litres of paint with 40% blue pigment. The hardware store already has mixtures of 20% blue pigment and 50% blue pigment. How many litres of each can the hardware store reuse to mix 10 litres of 40% blue pigment?

*Answer:* 3⅓ litres of recycled 20% mixture and 6⅔ litres of recycled 50% mixture

*Solution:* 40% of 10 litres of paint is 4 litres, so we know that the total amount of pigment in the mixture must be 4 litres. We can set up an equation to solve for ***x***, the amount of recycled 20% mixture in the new paint mixture:

0.20***x*** + 0.50(10 – ***x***) = 4

Notice that the amount of recycled 50% mixture is 10 – ***x***. This is because every part of the 10 litres of paint that isn’t the recycled 20% mixture is the 50% mixture. When we solve for ***x***, we find that ***x*** = 3⅓. That means that there are 3⅓ litres of recycled 20% mixture, so there must be 10 – 3⅓ = 6⅔ litres of recycled 50% mixture.