**Lower Elementary:**

*Question:* Tina has $1.00 in coins. She has 1 quarter, 3 dimes, and the rest are nickels. How many nickels does Tina have?

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**Upper Elementary:**

*Question:* The community center is hosting a fundraising concert event. They sold child tickets for $5 each and adult tickets for $10 each. They made $2,000. If they sold 120 adult tickets, how many child tickets did they sell?

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**Middle School:**

*Question:* Three cups of rice can feed 8 people. Exactly how many cups of rice are needed to feed 18 people?

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**Algebra and Up:**

*Question:* What is the equation of a line perpendicular to y = –1/2x + 2 and goes through the point (1, 3)?

**Lower Elementary:**

*Question:* Tina has $1.00 in coins. She has 1 quarter, 3 dimes, and the rest are nickels. How many nickels does Tina have?

*Answer:* 9 nickels

*Solution:* Since a quarter is worth 25¢ and a dime is worth 10¢, Tina has 25¢ + 10¢ + 10¢ + 10¢ = 55¢. Since she has $1.00 worth of coins, that means she has $1.00 – 55¢ = 45¢ in nickels. Since a nickel is worth 5¢, this means that 9 nickels is worth 45¢. So, Tina has 9 nickels.

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**Upper Elementary:**

*Question:* The community center is hosting a fundraising concert event. They sold child tickets for $5 each and adult tickets for $10 each. They made $2,000. If they sold 120 adult tickets, how many child tickets did they sell?

*Answer:* 160 tickets

*Solution:* The amount of profit they made from selling adult tickets is 120 × $10 = $1,200. Since they made a total of $2,000, the profit made from selling child tickets is $2,000 – $1,200 = $800. They sold child tickets for $5 each, so the number of child tickets sold was $800 ÷ $5 = 160 tickets.

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**Middle School:**

*Question:* Three cups of rice can feed 8 people. Exactly how many cups of rice are needed to feed 18 people?

*Answer:* 6 3/4 cups of rice

*Solution:* If x is the number of cups of rice needed to feed 18 people, we can set up the proportion 3/8 = x/18. Taking the cross product we have 8x = 54. Divide both sides by 8 we have that x = 6 3/4 cups of rice are needed to feed 18 people.

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**Algebra and Up:**

*Question:* What is the equation of a line perpendicular to y = –1/2x + 2 and goes through the point (1, 3)?

*Answer:* y = 2x + 1

*Solution:* If two lines are perpendicular, that means their slopes are the opposite reciprocal of the other. Since the slope of the given line is –1/2, to slope of the perpendicular line is 2. Since the line goes through the point (1, 3), we can use point-slope form to find the equation of the line.

y – 3 = 2(x – 1)

y – 3 = 2x – 2

y = 2x + 1