**Lower Elementary:**

*Question:* Jack’s suitcase can hold twice as much as Wendy’s suitcase. Wendy’s suitcase can hold twice as much as Danny’s suitcase. Danny’s suitcase is exactly big enough to hold 12 sweaters. How many sweaters can fit inside all three suitcases?

**Upper Elementary:**

*Question:* A family is driving 40 miles from their home in Boulder, Colorado, to a resort in the mountains. They use 3 gallons of gas to get there. How many miles do they travel for each gallon of gas?



**Middle School:**

*Question:* A writer types 36 words per minute. Two hundred forty words fit on a page. If the writer types an hour straight, how many pages does he write?

**Algebra and Up:**

*Question:* Jack is running through a maze with a total of 6,000 yards of passages. Jack runs through 40% of the passages, and he retraces 25% of his progress through the maze. If Jack runs for 10 minutes before he stops, then what was the average speed at which he ran through the maze? Give your answer in yards per second.

**Lower Elementary:**

*Question:* Jack’s suitcase can hold twice as much as Wendy’s suitcase. Wendy’s suitcase can hold twice as much as Danny’s suitcase. Danny’s suitcase is exactly big enough to hold 12 sweaters. How many sweaters can fit inside all three suitcases?

*Answer:* 84 sweaters

*Solution:* Since Danny’s suitcase holds 12 sweaters, Wendy’s holds 12 + 12 = 24 sweaters. Since Wendy’s suitcase holds 24 sweaters, Jack’s suitcase holds 24 + 24 = 48 sweaters. So, all three sweaters can hold 12 + 24 + 48 = 84 sweaters.

**Upper Elementary:**

*Question:* A family is driving 40 miles from their home in Boulder, Colorado, to a resort in the mountains. They use 3 gallons of gas to get there. How many miles do they travel for each gallon of gas?

*Answer:* 131/3 miles

*Solution:* To find the distance travelled per mile, we divide 40 miles by 3 gallons: 40 ÷ 3 = 131/3. The family travels 131/3 miles for each gallon of gas.



**Middle School:**

*Question:* A writer types 36 words per minute. Two hundred forty words fit on a page. If the writer types an hour straight, how many pages does he write?

*Answer:* 9 pages

*Solution:* Since the writer types 36 words per minute and there are 240 words on a page, that means he types 36/240 = 3/20 of a page per minute. So, in an hour, he types 3/20 × 60 = 180/20 = 9 pages per hour.

**Algebra and Up:**

*Question:* Jack is running through a maze with a total of 6,000 yards of passages. Jack runs through 40% of the passages, and he retraces 25% of his progress through the maze. If Jack runs for 10 minutes before he stops, then what was the average speed at which he ran through the maze? Give your answer in yards per second.

*Answer:* 5 yards per second

*Solution:* Jack runs through 40% of 6,000 = 2,400 yards of the maze, but since 25% of those 2,400 yards are retraced, he runs 2,400 × 1.25 = 3,000 yards. So, he runs 3,000 yards in 10 minutes, which is 300 yards per minute and 5 yards per second.