**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 64 kilometres from their home in Newmarket, Ontario, to a lakeside resort. They use 12 litres of gas to get there. How many kilometres do they travel for each litre 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 6000 metres of passages. Jack runs through 40% of the passages, but 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 metres 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 64 kilometres from their home in Newmarket, Ontario, to a lakeside resort. They use 12 litres of gas to get there. How many kilometres do they travel for each litre of gas?

*Answer:* 51/2 kilometres

*Solution:* To find the distance travelled per kilometre, we divide 64 kilometres by 12 litres: 64 ÷ 12 = 51/2. The family travels 51/2 kilometres for each litre 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 6000 metres of passages. Jack runs through 40% of the passages, but 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 metres per second.

*Answer:* 5 metres per second

*Solution:* Jack runs through 40% of 6000 = 2400 metres of the maze, but since 25% of those 2400 metres are retraced, he runs 2400 × 1.25 = 3000 metres. So, he runs 3000 metres in 10 minutes, which is 300 metres per minute and 5 metres per second.