

PRACTICE DRILL 24—WORD PROBLEMS (LOWER, MIDDLE, AND UPPER LEVELS ONLY)

1. There are 32 ounces in 1 quart. 128 ounces equals how many quarts? How many ounces are there in 7 quarts?
2. A car travels at a rate of 50 miles per hour. How long will it take to travel 300 miles?
3. Betty is twice as old as her daughter Fiona. Fiona is twice as old as her dog Rufus. If Rufus is 11, how old is Betty?
4. A clothing store sold 1,250 pairs of socks this year. Last year, the store sold 250 pairs of socks. This year's sales are how many times greater than last year's sales?
5. There are 500 students at Eisenhower High School. $\frac{2}{5}$ of the total students are freshmen. $\frac{3}{5}$ of all the freshmen are girls. How many freshman girls are there?

Practice Drill 24—Word Problems

1. 4 quarts

Set up a proportion: $\frac{\text{ounces}}{\text{quarts}} = \frac{32}{1} = \frac{128}{x}$. Then cross-multiply to get $32(x) = 128$. Divide both sides by 32, and $x = 4$.

224 ounces

Set up a proportion: $\frac{\text{ounces}}{\text{quarts}} = \frac{32}{1} = \frac{x}{7}$. Then cross-multiply to get $32(7) = x$, and $x = 224$.

2. 6 hours

Set up a proportion: $\frac{\text{miles}}{\text{hours}} = \frac{50}{1} = \frac{300}{x}$. Then cross-multiply to get $50x = 300$. Divide both sides by 50, and $x = 6$.

3. 44

Start with the given age: Rufus's. If Rufus is 11, then find Fiona's age. *Fiona is twice as old as Rufus* translates to $Fiona = 2(\text{Rufus})$ or $F = 2(11)$, so Fiona is 22. Next find Betty's age. *Betty is twice as old as Fiona* translates to $Betty = 2(\text{Fiona})$ or $B = 2(22)$. Therefore, Betty is 44.

4. 5

Translate the parts of the question. *This year's sales = 1,250, how many times greater than* means to divide, and *last year's sales = 250*. Thus, $\frac{1,250}{250} = 5$.

5. 120

Translate the first part of the problem: *of* means to multiply and *the total students = 500*. So, the number of freshman is $\frac{2}{5}(500) = \frac{2 \times 500}{5} = \frac{1000}{5} = 200$. Now, translate the second part of the problem: *of* means to multiply and *all the freshmen = 200*. Therefore, the number of freshmen girls is $\frac{3}{5}(200) = \frac{3 \times 200}{5} = \frac{600}{5} = 120$.