

**Problem**

- a) A MegaMart parking lot has room for 800 vehicles. One-quarter of the parking spaces are designated for trucks only. On Friday, there were 140 trucks in these spaces, and some cars parked in the lot. If the parking lot was  $\frac{5}{8}$  full, how many cars were there in the lot?
- b) Which piece of the given information in part a) is NOT necessary in solving the problem?
- c) Of the spaces that are designated for cars, what fraction was empty on Friday?

**Hints****Part a)****Hint 1** - How many vehicles were there in total, if the parking lot was  $\frac{5}{8}$  full?**Part c)****Hint 1** - How many spaces are there for cars?

**Solution**

- a) If the parking lot was  $\frac{5}{8}$  full, then there was a total of  $\frac{5}{8}$  of 800 which is equal to 500 vehicles in the lot. Since 140 of them were trucks, there were  $500 - 140 = 360$  cars in the lot.
- b) To solve part a), we did not need to know that one-quarter of the spaces in the lot are designated for trucks.
- c) Since one-quarter of the spaces in the lot are designated for trucks, three-quarters of the spaces, or  $\frac{3}{4}$  of 800 which is equal to 600 spaces were empty, a fraction of  $\frac{240}{600} = \frac{2}{5}$ .