Exercise 8.5.1 Solve the following ratio, proportion, and percent problems.

1. Find the following percentages.
   (a) 25% of 60  
   (b) 30% of 40  
   (c) 12% of 40

2. Some special percentages. Find the following percentages.
   (a) 10% of 70  
   (b) 10% of 120  
   (c) 10% of 35  
   (d) 10% of 19

3. What patterns do you notice about your answers in the previous exercise?

4. 21 out of 30 students commute more than 10 miles each day. What percent commute more than 10 miles? (Hint: The unknown is how many out of 100.)

5. Tax around California is about 8%. Estimate tax on each item by using 10% as your estimate and then add this to estimate the total cost.
   (a) $50 shirt  
   (b) $75 jacket  
   (c) $234 camera  
   (d) $1.75 coffee

6. Determine what amount the following numbers are 10% of. (e.g. $35 is 10% of $350).
   (a) $8 (Careful! the answer is NOT $0.80!)  
   (b) $29  
   (c) $43.50  
   (d) $0.60

7. Some more special percentages. Find the following percentages in your head.
   (a) 20% of 70  
   (b) 20% of 120  
   (c) 20% of 35  
   (d) 20% of 19

8. Some more special percentages. Find the following percentages in your head.
   (a) 1% of 70  
   (b) 1% of 120  
   (c) 1% of 35  
   (d) 1% of 19

9. A sweater that normally costs $40 is marked down by 20%. How much will it cost now (before tax)?

10. Jimmy had $120 to spend on a VCR. What price of VCR can he afford if the tax, shipping, and handling comes to 18% of the price of the VCR?

11. Albert is making Chinese food for his friends who are coming over for dinner Saturday night. The recipe is asking for $5\frac{1}{2}$ cups of mushrooms, $3\frac{2}{5}$ cups of bell peppers, and $2\frac{1}{4}$ cups of chicken breast. This recipe will feed 8 people. Albert only wants to feed 5 people. How many cups of each ingredient does he need?

12. If 45% of the workers in Jack’s company “brown bag” their lunch, how many people are in the company if 57 people “brown bag” their lunch?