MANUFACTURING EXERCISE
ANSWER KEY

1. Your composite plastic consists of 30% raw material A, 60% raw material B and 10% raw material C. If you want to make 500 pounds of the composite plastic, how many pounds of each raw material are needed?
   Product A = 500 x 30% = 150 pounds
   Product B = 500 x 60% = 300 pounds
   Product C = 500 x 10% = 50 pounds

2. Your composite plastic consists of 25% raw material A, 40% raw material B and 35% raw material C. If you want to make 1,000 pounds of the composite plastic, how many pounds of each raw material are needed?
   Product A = 1,000 x 25% = 250 pounds
   Product B = 1,000 x 40% = 400 pounds
   Product C = 1,000 x 35% = 350 pounds

3. Your composite plastic consists of 20% raw material A, 75% raw material B and 5% raw material C. If you want to make 3,000 pounds of the composite plastic, and you know you will have 20% scrap, how many pounds of each raw material is needed? How much will be scrap?
   Scrap = 3,000 x 20% = 600 pounds
   3,000 + 600 = 3,600 pounds
   Product A = 3,600 x 20% = 720 pounds
   Product B = 3,600 x 75% = 2,700 pounds
   Product C = 3,600 x 5% = 180 pounds

4. Your composite plastic consists of 30% raw material A, 40% raw material B and 30% raw material C. If you want to make 3,000 pounds of the composite plastic, and you know you will have 10% scrap in the processing of raw material B, how many pounds of each raw material is needed?
   Product A = 3,000 x 30% = 900 pounds
   Product B = 3,000 x 40% = 1,200 lbs +10% = 1,320 lbs
   Product C = 3,000 x 30% = 900 pounds

5. At Coastal Metal Fabricators, they need 22% of their assembly line employees on machine A, 46% on machine B and the rest on machine C. If the company has 100 employees, how many people are needed on each machine?
   Machine A = 100 x 22% = 22
   Machine B = 100 x 46% = 46
   Machine C = 100 x 32% = 32 or (100-22-46 = 32%)

6. At Atlas Machinery, they need 25% of their assembly line employees on machine A, 60% on machine B and the rest on machine C. If the company has 200 employees, how many are needed on each machine?
   Machine A = 200 x 25% = 50
   Machine B = 200 x 60% = 120
   Machine C = 200 x 15% = 30 or (200-50-120 = 30)