

### Objective 6.5.1

1. Solve the proportion:  $\frac{x+4}{9} = \frac{2}{3}$
2. Solve the proportion:  $\frac{x}{3} = \frac{x-3}{6}$
3. A quality control inspector found 6 defective video cassettes in a shipment of 4000 cassettes. At this rate, how many cassettes would be expected to be defective in a shipment of 10,000 cassettes?
4. A caterer estimates that 3 gal of coffee will serve 48 people. How much coffee is necessary to serve 144 PEOPLE

### Objective 6.5.1

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_

### Objective 6.5.2

1. The pressure,  $P$ , on a diver in the water varies directly as the depth,  $d$ . If the pressure is 6 lb/in<sup>2</sup> when the depth is 12 ft, what is the pressure when the depth is 16 ft?
2. The speed,  $v$ , of a gear varies inversely as the number of teeth,  $t$ . If a gear that has 36 teeth makes 30 revolutions per minute, how many revolutions per minute will a gear that has 54 teeth make?

### Objective 6.5.2

1. \_\_\_\_\_
2. \_\_\_\_\_

### Objective 6.6.1

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

### Objective 6.6.1

1. Solve  $K = \frac{mv^2}{2}$  for  $m$ .
2. Solve  $\frac{P_1V_1}{T_1} = \frac{P_2V_2}{T_2}$  for  $P_1$ .
3. Solve  $P = \frac{R-C}{n}$  for  $R$ .