**Vocabulary and formulas**
- Systems of equations
- Point of intersection
- Parallel lines
- Same line
- Consistent
- Inconsistent
- Dependent
- Independent
- Substitution method
- Elimination method
- Distance, rate and time formulas

1. Sketch examples of systems of equations that are consistent, inconsistent, and dependent. (Section 8.1)

2. Solve the following system graphically using graph paper. (Section 8.1)
   \[3x + 2y = -4\]
   \[y = 3x + 7\]

3. Solve the following system graphically using graph paper. (Section 8.1)
   \[5x - 2y = 4\]
   \[y + x = 5\]

4. Solve the following system graphically using graph paper. (Section 8.1)
   \[3x - y = 5\]
   \[6y - 2x = 10\]

5. Solve using the substitution method. List any solution as an ordered pair. (Section 8.2)
   \[x + 3y = 10\]
   \[3x - 3y = 5\]

6. Solve using the substitution method. List any solution as an ordered pair. (Section 8.2)
   \[7x - 5y = 8\]
   \[y = x - 2\]
7. Solve using the elimination method. List any solution as an ordered pair.  
(Section 8.2)  
\[4x + 5y = 34\]
\[3x - 10y = 53\]

8. Solve using the elimination method. List any solution as an ordered pair.  
(Section 8.2)  
\[2y + 3x = 2\]
\[4x + 6y = -\frac{7}{3}\]

9. Write a system of equation and solve using Substitution or Elimination.  
The perimeter of a rectangle is 24. The length of the rectangle is eight less than three times the width. Find the dimensions of the rectangle. (Section 8.3)

10. Write a system of equation and solve using Substitution or Elimination.  
The total number of passengers riding a certain city bus during the evening shift is 1000. If the child’s fare is $0.25, the adult fare is $0.75, and the total revenue from the fares in the evening is $650, how many children and how many adults rode the bus during the evening shift? (Section 8.3)

11. Write a system of equation and solve using Substitution or Elimination.  
Soybean meal is 16% protein and corn meal is 9% protein. How many pounds of each should be mixed to get a 350-lb mixture that is 12% protein? (Section 8.3)

(Section 8.6)  
\[x + 3y = 16\]
\[6x + y = 11\]

(Section 8.6)  
\[x + 2y - 3z = 9\]
\[2x - y + 2z = -8\]
\[3x - y - 4z = 3\]

14. Write a system of equation and solve using matrices.  
(Section 8.6)  
Jill bought two sandwiches and one order of fries for $5.50. Jane bought one sandwich and 2 orders of fries for $5.00. Find the price of each item.