

The first two problems are new material. The last three problems are review. Work all problems so you remember how to do everything we have learned.

1. Solve the system of equations using the MATRIX FEATURE in your calculator. Write the augmented matrix you will use in the calculator. Write your answer as an ordered triple, (x, y, z) .

$$4x + y + 6z = 7$$

$$3x + 3y + 2z = 17$$

$$-x - y + z = -9$$

2. Solve the system of equations using the MATRIX FEATURE in your calculator. Write the augmented matrix you will use in the calculator. Write your answer as an ordered triple, (x, y, z) .

$$x + 4y - z = -7$$

$$2x - y + 2z = 15$$

$$-3x + y - 3z = -22$$

3. Solve the system of equations in 3 variables by the ELIMINATION method. Write your answer as an ordered triple, (x, y, z) .

$$x - 2y + 3z = 9$$

$$-x + 3y = -4$$

$$2x - 5y + 5z = 17$$

4. Solve the system of equations in 3 variables by the SUBSTITUTION method. Write your answer as an ordered triple, (x, y, z) .

$$-3x + y + 2z = -13$$

$$7x + 2y - 6z = 37$$

$$x - y + 3z = -14$$

5. Use a calculator to answer the question(s).

A ship drops anchor in a harbor. The anchor is 49 ft above the surface of the water when it is released. Use the formula $h(t) = -16t^2 + vt + s$ to answer the following questions.

a. What is the value of s , the starting height?

b. What is the value of h when the anchor hits the water?

c. The starting velocity is zero. After how many seconds will the anchor hit the water?