

System of equations as lines and planes

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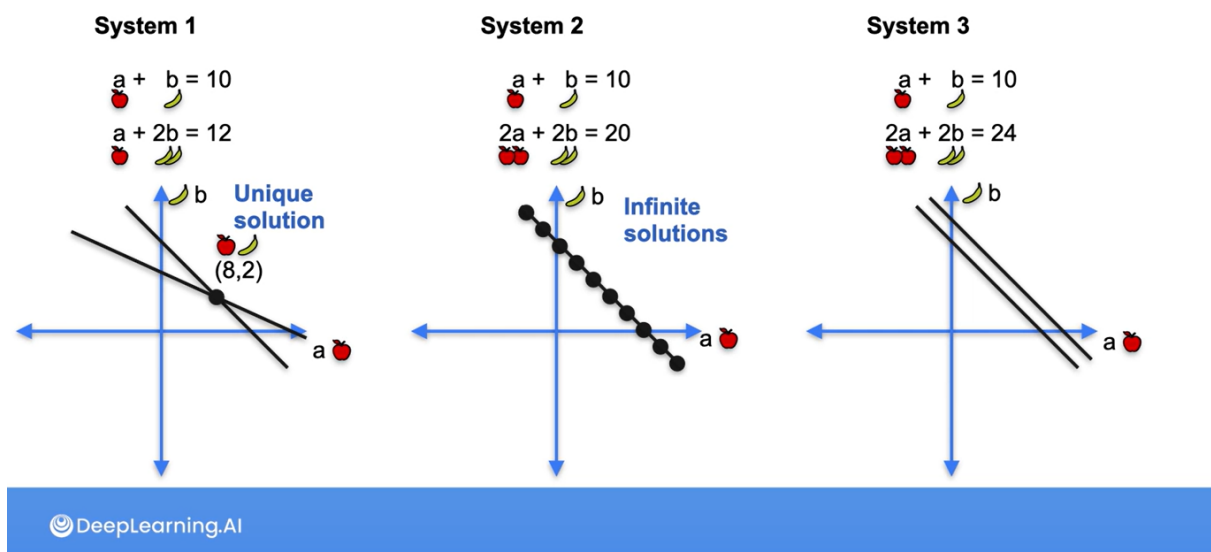
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As lines

Systems of equations as lines

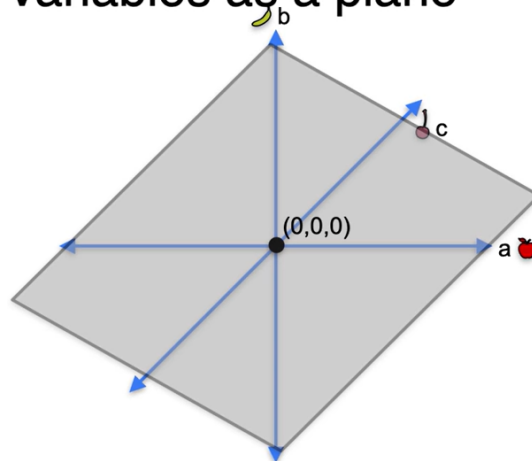


As planes

Linear equation in 3 variables as a plane

$$3a - 5b + 2c = 0$$

$$3(0) + 5(0) + 2(0) = 0$$



DeepLearning.AI

System 1

| Unique solution

| Non-singular

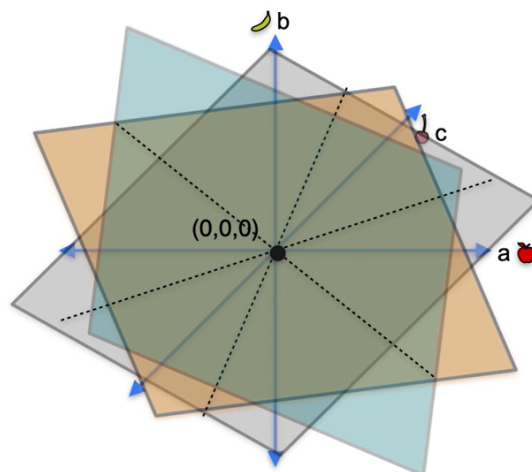
System 1

System 1

$$a + b + c = 0$$

$$a + 2b + c = 0$$

$$a + b + 2c = 0$$



DeepLearning.AI

System 2

| Infinite solutions

| Singular

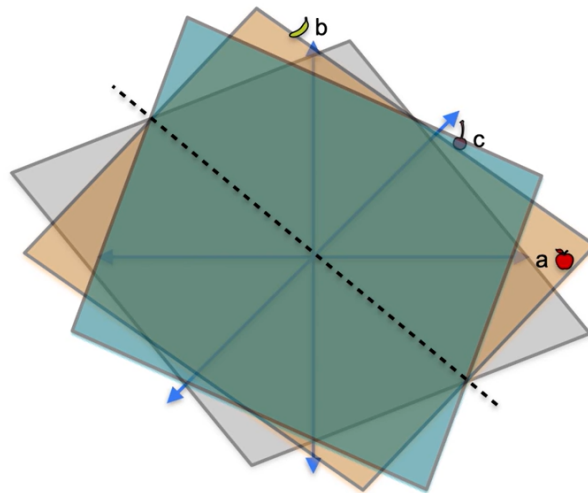
System 2

System 2

$$a + b + c = 0$$

$$a + b + 2c = 0$$

$$a + b + 3c = 0$$



System 3

| Multiple solutions

| Singular

System 3

System 3

$$a + b + c = 0$$

$$2a + 2b + 2c = 0$$

$$3a + 3b + 3c = 0$$

