

## Linear Systems (A)

Solve each system of equations.

1.  $2b + c + z = 11$   
 $3b + 4c + z = 19$   
 $3b + 6c + 5z = 43$

5.  $5b + 4v + 3y = 52$   
 $2b + 2v + 6y = 52$   
 $6b + 4v + 2y = 48$

2.  $6u + x + 6y = 40$   
 $6u + 5x + 6y = 56$   
 $5u + 2x + 4y = 35$

6.  $2b + v + z = 11$   
 $3b + 5v + 5z = 34$   
 $5b + 6v + 3z = 42$

3.  $2a + 4c + 3x = 37$   
 $3a + 3c + 3x = 33$   
 $3a + 3c + 6x = 48$

7.  $4a + 5c + 4u = 49$   
 $4a + 2c + 2u = 28$   
 $4a + 3c + 6u = 45$

4.  $2u + 6x + 6y = 26$   
 $6u + 6x + 5y = 40$   
 $3u + 4x + 5y = 26$

8.  $6a + 6c + 2v = 52$   
 $6a + 3c + v = 41$   
 $5a + 2c + 4v = 39$

## Linear Systems (A) Answers

Solve each system of equations.

1.  $2b + c + z = 11$   
 $3b + 4c + z = 19$   
 $3b + 6c + 5z = 43$   
 $b = 2, c = 2, z = 5$

5.  $5b + 4v + 3y = 52$   
 $2b + 2v + 6y = 52$   
 $6b + 4v + 2y = 48$   
 $b = 2, v = 6, y = 6$

2.  $6u + x + 6y = 40$   
 $6u + 5x + 6y = 56$   
 $5u + 2x + 4y = 35$   
 $u = 3, x = 4, y = 3$

6.  $2b + v + z = 11$   
 $3b + 5v + 5z = 34$   
 $5b + 6v + 3z = 42$   
 $b = 3, v = 4, z = 1$

3.  $2a + 4c + 3x = 37$   
 $3a + 3c + 3x = 33$   
 $3a + 3c + 6x = 48$   
 $a = 1, c = 5, x = 5$

7.  $4a + 5c + 4u = 49$   
 $4a + 2c + 2u = 28$   
 $4a + 3c + 6u = 45$   
 $a = 3, c = 5, u = 3$

4.  $2u + 6x + 6y = 26$   
 $6u + 6x + 5y = 40$   
 $3u + 4x + 5y = 26$   
 $u = 4, x = 1, y = 2$

8.  $6a + 6c + 2v = 52$   
 $6a + 3c + v = 41$   
 $5a + 2c + 4v = 39$   
 $a = 5, c = 3, v = 2$

## Linear Systems (B)

Solve each system of equations.

1.  $3x + 3y + 6z = 27$   
 $5x + 5y + 3z = 38$   
 $4x + 5y + 2z = 33$

5.  $5b + 2x + 5y = 49$   
 $b + 4x + 2y = 22$   
 $b + 6x + y = 21$

2.  $6a + 5u + 6x = 62$   
 $6a + 4u + 2x = 50$   
 $4a + u + 5x = 34$

6.  $5c + 3v + 4y = 34$   
 $c + 6v + 2y = 29$   
 $5c + 4v + 3y = 32$

3.  $3a + 5b + 6c = 27$   
 $6a + 4b + c = 25$   
 $5a + 4b + 3c = 25$

7.  $a + x + 5z = 33$   
 $5a + 6x + 4z = 63$   
 $3a + 5x + z = 35$

4.  $4a + 2u + 2x = 30$   
 $6a + 4u + 2x = 42$   
 $a + 6u + 2x = 26$

8.  $4b + 4y + 3z = 47$   
 $2b + 3y + 6z = 48$   
 $b + 3y + 5z = 37$

## Linear Systems (B) Answers

Solve each system of equations.

1.  $3x + 3y + 6z = 27$   
 $5x + 5y + 3z = 38$   
 $4x + 5y + 2z = 33$   
 $x = 4, y = 3, z = 1$

5.  $5b + 2x + 5y = 49$   
 $b + 4x + 2y = 22$   
 $b + 6x + y = 21$   
 $b = 4, x = 2, y = 5$

2.  $6a + 5u + 6x = 62$   
 $6a + 4u + 2x = 50$   
 $4a + u + 5x = 34$   
 $a = 5, u = 4, x = 2$

6.  $5c + 3v + 4y = 34$   
 $c + 6v + 2y = 29$   
 $5c + 4v + 3y = 32$   
 $c = 1, v = 3, y = 5$

3.  $3a + 5b + 6c = 27$   
 $6a + 4b + c = 25$   
 $5a + 4b + 3c = 25$   
 $a = 2, b = 3, c = 1$

7.  $a + x + 5z = 33$   
 $5a + 6x + 4z = 63$   
 $3a + 5x + z = 35$   
 $a = 5, x = 3, z = 5$

4.  $4a + 2u + 2x = 30$   
 $6a + 4u + 2x = 42$   
 $a + 6u + 2x = 26$   
 $a = 4, u = 2, x = 5$

8.  $4b + 4y + 3z = 47$   
 $2b + 3y + 6z = 48$   
 $b + 3y + 5z = 37$   
 $b = 6, y = 2, z = 5$

## Linear Systems (C)

Solve each system of equations.

1.  $4c + 3u + 6x = 66$   
 $5c + 4u + 4x = 70$   
 $5c + 4u + 6x = 78$

5.  $2a + 6v + 3z = 50$   
 $3a + 3v + 5z = 41$   
 $4a + 4v + z = 32$

2.  $6a + 6x + y = 48$   
 $4a + 2x + 4y = 42$   
 $a + 5x + 3y = 45$

6.  $4a + 3u + 3v = 30$   
 $4a + 6u + 3v = 42$   
 $4a + 3u + 2v = 28$

3.  $u + 6v + 5z = 43$   
 $3u + 3v + 2z = 34$   
 $5u + 2v + 4z = 54$

7.  $6a + c + 5y = 52$   
 $5a + 6c + y = 43$   
 $5a + 5c + 5y = 60$

4.  $5v + 4y + 2z = 48$   
 $5v + 5y + 5z = 65$   
 $v + 4y + 3z = 29$

8.  $2c + 5x + 4y = 38$   
 $2c + 4x + 3y = 32$   
 $6c + 3x + 3y = 54$

## Linear Systems (C) Answers

Solve each system of equations.

1.  $4c + 3u + 6x = 66$   
 $5c + 4u + 4x = 70$   
 $5c + 4u + 6x = 78$   
 $c = 6, u = 6, x = 4$

5.  $2a + 6v + 3z = 50$   
 $3a + 3v + 5z = 41$   
 $4a + 4v + z = 32$   
 $a = 1, v = 6, z = 4$

2.  $6a + 6x + y = 48$   
 $4a + 2x + 4y = 42$   
 $a + 5x + 3y = 45$   
 $a = 2, x = 5, y = 6$

6.  $4a + 3u + 3v = 30$   
 $4a + 6u + 3v = 42$   
 $4a + 3u + 2v = 28$   
 $a = 3, u = 4, v = 2$

3.  $u + 6v + 5z = 43$   
 $3u + 3v + 2z = 34$   
 $5u + 2v + 4z = 54$   
 $u = 6, v = 2, z = 5$

7.  $6a + c + 5y = 52$   
 $5a + 6c + y = 43$   
 $5a + 5c + 5y = 60$   
 $a = 4, c = 3, y = 5$

4.  $5v + 4y + 2z = 48$   
 $5v + 5y + 5z = 65$   
 $v + 4y + 3z = 29$   
 $v = 6, y = 2, z = 5$

8.  $2c + 5x + 4y = 38$   
 $2c + 4x + 3y = 32$   
 $6c + 3x + 3y = 54$   
 $c = 6, x = 2, y = 4$

## Linear Systems (D)

Solve each system of equations.

1.  $4u + 6v + 6z = 44$   
 $6u + 4v + 3z = 31$   
 $6u + 4v + 4z = 36$

5.  $2c + x + 6y = 52$   
 $c + 6x + y = 36$   
 $c + x + 3y = 28$

2.  $3a + 4v + 3z = 32$   
 $6a + 3v + 2z = 38$   
 $4a + 6v + 4z = 44$

6.  $5b + 2y + 3z = 43$   
 $3b + 6y + 5z = 45$   
 $6b + 6y + 4z = 60$

3.  $2v + 3y + 3z = 37$   
 $3v + 6y + 3z = 54$   
 $6v + 6y + 6z = 84$

7.  $3a + b + 4c = 22$   
 $a + 5b + 2c = 22$   
 $a + 2b + 2c = 13$

4.  $3v + 2x + 5y = 52$   
 $3v + 5x + 6y = 75$   
 $4v + 3x + 3y = 53$

8.  $2a + u + x = 12$   
 $a + 2u + 3x = 27$   
 $3a + 4u + 5x = 49$

## Linear Systems (D) Answers

Solve each system of equations.

1.  $4u + 6v + 6z = 44$   
 $6u + 4v + 3z = 31$   
 $6u + 4v + 4z = 36$   
 $u = 2, v = 1, z = 5$

5.  $2c + x + 6y = 52$   
 $c + 6x + y = 36$   
 $c + x + 3y = 28$   
 $c = 6, x = 4, y = 6$

2.  $3a + 4v + 3z = 32$   
 $6a + 3v + 2z = 38$   
 $4a + 6v + 4z = 44$   
 $a = 4, v = 2, z = 4$

6.  $5b + 2y + 3z = 43$   
 $3b + 6y + 5z = 45$   
 $6b + 6y + 4z = 60$   
 $b = 6, y = 2, z = 3$

3.  $2v + 3y + 3z = 37$   
 $3v + 6y + 3z = 54$   
 $6v + 6y + 6z = 84$   
 $v = 5, y = 4, z = 5$

7.  $3a + b + 4c = 22$   
 $a + 5b + 2c = 22$   
 $a + 2b + 2c = 13$   
 $a = 5, b = 3, c = 1$

4.  $3v + 2x + 5y = 52$   
 $3v + 5x + 6y = 75$   
 $4v + 3x + 3y = 53$   
 $v = 5, x = 6, y = 5$

8.  $2a + u + x = 12$   
 $a + 2u + 3x = 27$   
 $3a + 4u + 5x = 49$   
 $a = 1, u = 4, x = 6$



## Linear Systems (E)

Solve each system of equations.

1.  $3c + 5x + 4z = 46$   
 $4c + 4x + 3z = 39$   
 $6c + 6x + 5z = 61$

5.  $2b + u + 5v = 40$   
 $4b + 5u + 6v = 62$   
 $b + 3u + v = 16$

2.  $2b + y + 4z = 32$   
 $3b + 5y + 4z = 61$   
 $4b + y + 2z = 34$

6.  $3b + 6c + 3x = 30$   
 $2b + c + x = 12$   
 $3b + 6c + 5x = 40$

3.  $3b + 2u + x = 12$   
 $6b + 4u + 3x = 26$   
 $4b + 5u + 5x = 28$

7.  $2c + 6u + 6z = 20$   
 $6c + 2u + 3z = 14$   
 $c + 2u + 2z = 7$

4.  $4c + 3x + 5y = 23$   
 $5c + 2x + 5y = 24$   
 $2c + 4x + 2y = 16$

8.  $5v + 2y + 2z = 25$   
 $v + 3y + 5z = 39$   
 $6v + 4y + 3z = 42$

## Linear Systems (E) Answers

Solve each system of equations.

1.  $3c + 5x + 4z = 46$   
 $4c + 4x + 3z = 39$   
 $6c + 6x + 5z = 61$   
 $c = 2, x = 4, z = 5$

5.  $2b + u + 5v = 40$   
 $4b + 5u + 6v = 62$   
 $b + 3u + v = 16$   
 $b = 4, u = 2, v = 6$

2.  $2b + y + 4z = 32$   
 $3b + 5y + 4z = 61$   
 $4b + y + 2z = 34$   
 $b = 5, y = 6, z = 4$

6.  $3b + 6c + 3x = 30$   
 $2b + c + x = 12$   
 $3b + 6c + 5x = 40$   
 $b = 3, c = 1, x = 5$

3.  $3b + 2u + x = 12$   
 $6b + 4u + 3x = 26$   
 $4b + 5u + 5x = 28$   
 $b = 2, u = 2, x = 2$

7.  $2c + 6u + 6z = 20$   
 $6c + 2u + 3z = 14$   
 $c + 2u + 2z = 7$   
 $c = 1, u = 1, z = 2$

4.  $4c + 3x + 5y = 23$   
 $5c + 2x + 5y = 24$   
 $2c + 4x + 2y = 16$   
 $c = 3, x = 2, y = 1$

8.  $5v + 2y + 2z = 25$   
 $v + 3y + 5z = 39$   
 $6v + 4y + 3z = 42$   
 $v = 1, y = 6, z = 4$

## Linear Systems (F)

Solve each system of equations.

1.  $4a + 4b + 4x = 36$   
 $a + b + 5x = 13$   
 $4a + 6b + 4x = 42$

5.  $3a + 4u + 4z = 26$   
 $a + 5u + z = 15$   
 $a + 2u + z = 9$

2.  $2c + 4u + 5z = 50$   
 $2c + 2u + 4z = 34$   
 $c + 3u + 5z = 41$

6.  $3c + 4v + 5x = 26$   
 $5c + v + x = 23$   
 $6c + 6v + x = 32$

3.  $3a + 2c + y = 14$   
 $4a + 6c + 3y = 27$   
 $a + 2c + 3y = 10$

7.  $2c + 4v + 5z = 51$   
 $c + 4v + 3z = 36$   
 $5c + 3v + 6z = 67$

4.  $x + y + 3z = 29$   
 $6x + 2y + 3z = 60$   
 $4x + 2y + 4z = 56$

8.  $6a + 4c + x = 50$   
 $3a + 4c + 3x = 43$   
 $6a + c + 6x = 58$

## Linear Systems (F) Answers

Solve each system of equations.

1.  $4a + 4b + 4x = 36$   
 $a + b + 5x = 13$   
 $4a + 6b + 4x = 42$   
 $a = 5, b = 3, x = 1$

5.  $3a + 4u + 4z = 26$   
 $a + 5u + z = 15$   
 $a + 2u + z = 9$   
 $a = 2, u = 2, z = 3$

2.  $2c + 4u + 5z = 50$   
 $2c + 2u + 4z = 34$   
 $c + 3u + 5z = 41$   
 $c = 3, u = 6, z = 4$

6.  $3c + 4v + 5x = 26$   
 $5c + v + x = 23$   
 $6c + 6v + x = 32$   
 $c = 4, v = 1, x = 2$

3.  $3a + 2c + y = 14$   
 $4a + 6c + 3y = 27$   
 $a + 2c + 3y = 10$   
 $a = 3, c = 2, y = 1$

7.  $2c + 4v + 5z = 51$   
 $c + 4v + 3z = 36$   
 $5c + 3v + 6z = 67$   
 $c = 5, v = 4, z = 5$

4.  $x + y + 3z = 29$   
 $6x + 2y + 3z = 60$   
 $4x + 2y + 4z = 56$   
 $x = 5, y = 6, z = 6$

8.  $6a + 4c + x = 50$   
 $3a + 4c + 3x = 43$   
 $6a + c + 6x = 58$   
 $a = 5, c = 4, x = 4$

## Linear Systems (G)

Solve each system of equations.

1.  $4b + 4u + 5z = 25$   
 $b + 2u + 5z = 11$   
 $5b + 5u + z = 26$

5.  $6c + 2x + 2y = 36$   
 $4c + 5x + 6y = 36$   
 $2c + 6x + 3y = 25$

2.  $5b + 2v + 6x = 44$   
 $b + 4v + 6x = 40$   
 $5b + 5v + x = 52$

6.  $4a + 5u + 5y = 66$   
 $a + 2u + 3y = 30$   
 $4a + 2u + 6y = 60$

3.  $4a + x + 5z = 18$   
 $6a + 2x + 2z = 22$   
 $3a + 4x + 5z = 18$

7.  $4a + c + 5u = 38$   
 $a + c + 6u = 33$   
 $5a + 5c + 4u = 61$

4.  $3a + b + 2y = 25$   
 $6a + 3b + 3y = 51$   
 $2a + 4b + 6y = 60$

8.  $b + 4c + 3v = 30$   
 $4b + 2c + 3v = 28$   
 $3b + 2c + v = 18$

## Linear Systems (G) Answers

Solve each system of equations.

1.  $4b + 4u + 5z = 25$   
 $b + 2u + 5z = 11$   
 $5b + 5u + z = 26$   
 $b = 4, u = 1, z = 1$

5.  $6c + 2x + 2y = 36$   
 $4c + 5x + 6y = 36$   
 $2c + 6x + 3y = 25$   
 $c = 5, x = 2, y = 1$

2.  $5b + 2v + 6x = 44$   
 $b + 4v + 6x = 40$   
 $5b + 5v + x = 52$   
 $b = 4, v = 6, x = 2$

6.  $4a + 5u + 5y = 66$   
 $a + 2u + 3y = 30$   
 $4a + 2u + 6y = 60$   
 $a = 4, u = 4, y = 6$

3.  $4a + x + 5z = 18$   
 $6a + 2x + 2z = 22$   
 $3a + 4x + 5z = 18$   
 $a = 3, x = 1, z = 1$

7.  $4a + c + 5u = 38$   
 $a + c + 6u = 33$   
 $5a + 5c + 4u = 61$   
 $a = 3, c = 6, u = 4$

4.  $3a + b + 2y = 25$   
 $6a + 3b + 3y = 51$   
 $2a + 4b + 6y = 60$   
 $a = 3, b = 6, y = 5$

8.  $b + 4c + 3v = 30$   
 $4b + 2c + 3v = 28$   
 $3b + 2c + v = 18$   
 $b = 2, c = 4, v = 4$

## Linear Systems (H)

Solve each system of equations.

1.  $6x + y + 3z = 48$   
 $2x + 3y + 4z = 50$   
 $4x + 5y + 2z = 58$

5.  $4b + u + 6y = 41$   
 $4b + 2u + 3y = 34$   
 $5b + 5u + 2y = 48$

2.  $5c + 2v + 2y = 21$   
 $5c + 4v + 3y = 26$   
 $5c + 2v + 3y = 22$

6.  $6c + 4x + z = 48$   
 $2c + 5x + 3z = 34$   
 $6c + 3x + 4z = 58$

3.  $b + 5u + 3z = 38$   
 $4b + 5u + 4z = 52$   
 $b + 6u + 3z = 42$

7.  $3u + 4x + 5z = 50$   
 $4u + 4x + 6z = 56$   
 $2u + 6x + z = 44$

4.  $5u + 3v + 6x = 14$   
 $5u + v + 6x = 12$   
 $4u + 4v + 6x = 14$

8.  $4u + 3x + 3z = 27$   
 $2u + x + 5z = 23$   
 $u + 5x + 2z = 19$

## Linear Systems (H) Answers

Solve each system of equations.

1.  $6x + y + 3z = 48$   
 $2x + 3y + 4z = 50$   
 $4x + 5y + 2z = 58$   
 $x = 4, y = 6, z = 6$

5.  $4b + u + 6y = 41$   
 $4b + 2u + 3y = 34$   
 $5b + 5u + 2y = 48$   
 $b = 3, u = 5, y = 4$

2.  $5c + 2v + 2y = 21$   
 $5c + 4v + 3y = 26$   
 $5c + 2v + 3y = 22$   
 $c = 3, v = 2, y = 1$

6.  $6c + 4x + z = 48$   
 $2c + 5x + 3z = 34$   
 $6c + 3x + 4z = 58$   
 $c = 6, x = 2, z = 4$

3.  $b + 5u + 3z = 38$   
 $4b + 5u + 4z = 52$   
 $b + 6u + 3z = 42$   
 $b = 3, u = 4, z = 5$

7.  $3u + 4x + 5z = 50$   
 $4u + 4x + 6z = 56$   
 $2u + 6x + z = 44$   
 $u = 2, x = 6, z = 4$

4.  $5u + 3v + 6x = 14$   
 $5u + v + 6x = 12$   
 $4u + 4v + 6x = 14$   
 $u = 1, v = 1, x = 1$

8.  $4u + 3x + 3z = 27$   
 $2u + x + 5z = 23$   
 $u + 5x + 2z = 19$   
 $u = 3, x = 2, z = 3$



## Linear Systems (I)

Solve each system of equations.

1.  $2b + 3c + 5y = 43$   
 $5b + 2c + 2y = 44$   
 $4b + c + 4y = 46$

5.  $3c + 4u + 2v = 28$   
 $c + 6u + v = 29$   
 $6c + 2u + 5v = 35$

2.  $3a + 6b + 6z = 36$   
 $6a + b + 4z = 42$   
 $5a + 4b + 2z = 40$

6.  $5u + x + 6y = 51$   
 $6u + x + y = 23$   
 $5u + 6x + 2y = 52$

3.  $6v + 5x + 2y = 34$   
 $v + 3x + 6y = 20$   
 $3v + 5x + 4y = 30$

7.  $6u + 2y + 4z = 42$   
 $5u + 3y + z = 29$   
 $4u + 4y + 3z = 46$

4.  $4a + 4v + 3y = 46$   
 $4a + 3v + 5y = 53$   
 $5a + 4v + y = 36$

8.  $a + 5v + 3z = 19$   
 $a + 5v + 6z = 22$   
 $3a + v + 2z = 8$

## Linear Systems (I) Answers

Solve each system of equations.

1.  $2b + 3c + 5y = 43$   
 $5b + 2c + 2y = 44$   
 $4b + c + 4y = 46$   
 $b = 6, c = 2, y = 5$

5.  $3c + 4u + 2v = 28$   
 $c + 6u + v = 29$   
 $6c + 2u + 5v = 35$   
 $c = 2, u = 4, v = 3$

2.  $3a + 6b + 6z = 36$   
 $6a + b + 4z = 42$   
 $5a + 4b + 2z = 40$   
 $a = 6, b = 2, z = 1$

6.  $5u + x + 6y = 51$   
 $6u + x + y = 23$   
 $5u + 6x + 2y = 52$   
 $u = 2, x = 5, y = 6$

3.  $6v + 5x + 2y = 34$   
 $v + 3x + 6y = 20$   
 $3v + 5x + 4y = 30$   
 $v = 2, x = 4, y = 1$

7.  $6u + 2y + 4z = 42$   
 $5u + 3y + z = 29$   
 $4u + 4y + 3z = 46$   
 $u = 1, y = 6, z = 6$

4.  $4a + 4v + 3y = 46$   
 $4a + 3v + 5y = 53$   
 $5a + 4v + y = 36$   
 $a = 2, v = 5, y = 6$

8.  $a + 5v + 3z = 19$   
 $a + 5v + 6z = 22$   
 $3a + v + 2z = 8$   
 $a = 1, v = 3, z = 1$

## Linear Systems (J)

Solve each system of equations.

1.  $5c + 5u + 5y = 70$   
 $2c + 6u + y = 49$   
 $5c + 2u + 6y = 55$

5.  $3a + c + 3u = 27$   
 $3a + 6c + 4u = 63$   
 $4a + 6c + u = 46$

2.  $4a + b + 4v = 10$   
 $2a + b + 5v = 9$   
 $a + b + 5v = 8$

6.  $2b + 4c + x = 40$   
 $4b + c + 5x = 50$   
 $6b + 5c + x = 70$

3.  $a + 4b + 5v = 30$   
 $5a + 5b + 5v = 50$   
 $3a + b + 2v = 20$

7.  $3a + c + 5u = 42$   
 $a + 2c + u = 14$   
 $4a + c + 3u = 37$

4.  $5u + x + z = 25$   
 $2u + x + 4z = 19$   
 $6u + 4x + 3z = 42$

8.  $3u + y + 3z = 22$   
 $6u + 2y + 3z = 32$   
 $u + 3y + z = 18$

## Linear Systems (J) Answers

Solve each system of equations.

1.  $5c + 5u + 5y = 70$   
 $2c + 6u + y = 49$   
 $5c + 2u + 6y = 55$   
 $c = 5, u = 6, y = 3$

5.  $3a + c + 3u = 27$   
 $3a + 6c + 4u = 63$   
 $4a + 6c + u = 46$   
 $a = 1, c = 6, u = 6$

2.  $4a + b + 4v = 10$   
 $2a + b + 5v = 9$   
 $a + b + 5v = 8$   
 $a = 1, b = 2, v = 1$

6.  $2b + 4c + x = 40$   
 $4b + c + 5x = 50$   
 $6b + 5c + x = 70$   
 $b = 6, c = 6, x = 4$

3.  $a + 4b + 5v = 30$   
 $5a + 5b + 5v = 50$   
 $3a + b + 2v = 20$   
 $a = 4, b = 4, v = 2$

7.  $3a + c + 5u = 42$   
 $a + 2c + u = 14$   
 $4a + c + 3u = 37$   
 $a = 5, c = 2, u = 5$

4.  $5u + x + z = 25$   
 $2u + x + 4z = 19$   
 $6u + 4x + 3z = 42$   
 $u = 4, x = 3, z = 2$

8.  $3u + y + 3z = 22$   
 $6u + 2y + 3z = 32$   
 $u + 3y + z = 18$   
 $u = 2, y = 4, z = 4$