

Systems of Three Equations HW
Solve each of the following.

Name:

1. $x + 2y - 3z = 11$

$2x + y - 2z = 9$

$4x + 3y + z = 16$

2. $x - y + 3z = 19$

$-2x + 2y - 6z = 9$

$3x + 5y + 2z = 3$

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1. $x + 2y - 3z = 11$

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$-2x + 2y - 6z = 9$

$3x + 5y + 2z = 3$

(2, 3, -1)

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NO solution

key

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

$x - 3y + z = -6$

$3x + y - 4z = 31$

4. $x + 2y - 5z = -12$

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

$3x - 4y - z = 11$

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

$x - 3y + z = -6$

$3x + y - 4z = 31$

(1, 0, -7)

(4, 1/2, 3)

4. $x + 2y - 5z = -12$

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

$3x - 4y - z = 11$

5. You found \$6.60 on the ground at school, all nickels, dimes and quarters. You have twice as many quarters as dimes and 42 coins in all. How many of each type of coin do you have?

12 nickels
10 dimes
20 quarters

5. You found \$6.60 on the ground at school, all nickels, dimes and quarters. You have twice as many quarters as dimes and 42 coins in all. How many of each type of coin do you have?

6. Find a , b , and c so that the linear system below has $(3, -2, 1)$ as its only solution. Explain your reasoning.

$3x + 2y - 7z = a$

$x + 3y + z = b$

$4x - 2y - z = c$

6. Find a , b , and c so that the linear system below has $(3, -2, 1)$ as its only solution. Explain your reasoning.

$3x + 2y - 7z = a$

$x + 3y + z = b$

$4x - 2y - z = c$

$a = -2$ $b = -2$ $c = 15$

7. In $\triangle ABC$ if $\angle A$ is 3 times as large as $\angle B$, and $\angle B$ is 30° smaller than $\angle C$, what are the measures of angles A , B , and C ?

7. In $\triangle ABC$ if $\angle A$ is 3 times as large as $\angle B$, and $\angle B$ is 30° smaller than $\angle C$, what are the measures of angles A , B , and C ?

$m\angle A = 90^\circ$

$m\angle B = 30^\circ$

$m\angle C = 60^\circ$