

Name _____

Date _____

Topic : Word Problems with Consecutive Integers - Worksheet 1

Solve the following:

- 1 Two consecutive integers have a sum of 77. What are the two integers?
- 2 The sum of two consecutive integers is 41. What are the two integers?
- 3 What four consecutive integers have a sum of 86. Name them.
- 4 Two consecutive even integers have a sum of 38. What are the two integers?
- 5 Two consecutive odd integers have a sum of 92. What are the two odd integers?

Mixed Practice

Solve for the variable and check your answers.

1) $\frac{b}{-5} = 11$

2) $5x = 9x - 16$

3) $18n + 12 = 27n + 3$

4) $5(x + 7) = 6(x - 5)$

5) $4(3 - u) + u = 22 + 2u$

6) $5c - 4 - 2c + 1 = 8c + 2$

Consecutive

$$x, x+1, x+2, \dots$$

Consecutive even/odd

$$x, x+2, x+4, \dots$$

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Solve the following:

- 1 Two consecutive integers have a sum of 77. What are the two integers?

$$\begin{array}{r} x + x + 1 = 77 \\ 2x + 1 = 77 \\ \hline -1 \quad -1 \\ \hline 2x = 76 \\ \hline x = 38 \end{array}$$

38, 39

- 2 The sum of two consecutive integers is 41. What are the two integers?

$$\begin{array}{r} x + x + 1 = 41 \\ 2x + 1 = 41 \\ \hline -1 \quad -1 \\ \hline 2x = 40 \\ \hline x = 20 \end{array}$$

20, 21

- 3 What four consecutive integers have a sum of 86. Name them.

$$\begin{array}{r} x + x + 1 + x + 2 + x + 3 = 86 \\ 4x + 6 = 86 \\ \hline -6 \quad -6 \\ \hline 4x = 80 \\ \hline x = 20 \end{array}$$

20, 21, 22, 23

- 4 Two consecutive even integers have a sum of 38. What are the two integers?

$$\begin{array}{r} x + x + 2 = 38 \\ 2x + 2 = 38 \\ \hline -2 \quad -2 \\ \hline 2x = 36 \\ \hline x = 18 \end{array}$$

18, 20

- 5 Two consecutive odd integers have a sum of 92. What are the two odd integers?

$$\begin{array}{r} x + x + 2 = 92 \\ 2x + 2 = 92 \\ \hline -2 \quad -2 \\ \hline 2x = 90 \\ \hline x = 45 \end{array}$$

45, 47

Mixed Practice

Solve for the variable and check your answers.

1) $\frac{b}{-5} = 11(-5)$

$$\boxed{b = -55}$$

2) $5x = 9x - 16$

$$\begin{array}{r} -4x = -16 \\ \hline -4 \quad -4 \\ \hline x = 4 \end{array}$$

x = 4

3) $18n + 12 = 27n + 3$

$$\begin{array}{r} -9n + 12 = 3 \\ \hline -12 \quad -12 \\ \hline -9n = -9 \\ \hline n = 1 \end{array}$$

n = 1

4) $5(x+7) = 6(x-5)$

$$\begin{array}{r} 5x + 35 = 6x - 30 \\ \hline -5x \quad -5x \\ \hline 35 = x - 30 \\ \hline 30 \quad 30 \\ \hline 65 = x \end{array}$$

65 = x

5) $4(3-u) + u = 22 + 2u$

$$\begin{array}{r} 12 - 4u + u = 22 + 2u \\ \hline 12 - 3u = 22 + 2u \\ \hline -3u \quad -3u \\ \hline 12 = 22 + 5u \\ \hline -22 \quad -22 \\ \hline -10 = 5u \\ \hline -2 \quad -2 \\ \hline -2 = u \end{array}$$

-2 = u

6) $5c - 4 - 2c + 1 = 8c + 2$

$$\begin{array}{r} 3c - 3 = 8c + 2 \\ \hline -3c \quad -3c \\ \hline -3 = 5c + 2 \\ \hline -2 \quad -2 \\ \hline -5 = 5c \\ \hline -1 = c \end{array}$$

-1 = c