

Worksheet

05/15/2020

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Problem quickname: 9505

1)

Solve the equation: Determine the value of the variable x . Combine like terms and perform equivalent transformations.

Quick:
9505

- a) $2 + 1 - 1 = -9x + 56$ Lösung: $x = 6$
 b) $7x - 135 + 4 = 6 - 4$ Lösung: $x = 19$
 c) $45 - 3 - x = 8x - 3$ Lösung: $x = 5$
 d) $-250 - 4 - 3x = 4 - 6x$ Lösung: $x = 86$
 e) $11x - 430 + 5 = -1 + 3x$ Lösung: $x = 53$
 f) $106 + 3x - 2 = -4 + 9x$ Lösung: $x = 18$
 g) $5x - 210 + x = -2x + 5x$ Lösung: $x = 70$
 h) $-10x + 613 - 1 = 5x - 6x$ Lösung: $x = 68$
 i) $6x - 635 + 5 = -x - 2x$ Lösung: $x = 70$

2)

Solve the equation: Determine the value of the variable.

Quick:
9505

- a) $145 + 8 - 1 = 4 + 4i - 4$ | rearrange and combine like terms
 $152 = 4i$ | -152
 $0 = 4i - 152$ | $-4i$
 $-4i = -152$ | $:-4$
 $i = 38$
- b) $-2n + 46 - 5 = 2 + 3 - 2$ | rearrange and combine like terms
 $-2n + 41 = 3$ | -41
 $-2n = -38$ | $:-2$
 $n = 19$
- c) $1 - 5 + 2 = 683 - 7q - 6$ | rearrange and combine like terms
 $-2 = -7q + 677$ | $+2$
 $0 = -7q + 679$ | $+7q$
 $7q = 679$ | $:7$
 $q = 97$
- d) $-4n + 134 + 5 = 2 + 4n - 7$ | rearrange and combine like terms
 $-4n + 139 = 4n - 5$ | -139
 $-4n = 4n - 144$ | $-4n$
 $-8n = -144$ | $:-8$
 $n = 18$

- e) $10g + 2 + 3 = 3g + 1 + 179$ | rearrange and combine like terms
 $10g + 5 = 3g + 180$ | -5
 $10g = 3g + 175$ | $-3g$
 $7g = 175$ | $: 7$
 $g = 25$
- f) $-7c - 4c + 5c = -415 + 4c + 5$ | rearrange and combine like terms
 $-6c = 4c - 410$ | $-4c$
 $-10c = -410$ | $: -10$
 $c = 41$
- g) $-5b - 1 - 2b = -515 - 5 + 1$ | rearrange and combine like terms
 $-7b - 1 = -519$ | $+1$
 $-7b = -518$ | $: -7$
 $b = 74$
- h) $-7j - 7j + 4j = -4j - 3 - 543$ | rearrange and combine like terms
 $-10j = -4j - 546$ | $+4j$
 $-6j = -546$ | $: -6$
 $j = 91$
- i) $13g - 2g - 4g = -5g + 756 + 3g$ | rearrange and combine like terms
 $7g = -2g + 756$ | $+2g$
 $9g = 756$ | $: 9$
 $g = 84$

3)

Solve the equation: Determine the value of the variable x.

Quick:
9505

- a) $-353 + 5 = -5x - 3$ | rearrange and combine like terms
 $-348 = -5x - 3$ | $+348$
 $0 = -5x + 345$ | $+5x$
 $5x = 345$ | $: 5$
 $x = 69$
- b) $405 + 3x = 14x - 2x$ | rearrange and combine like terms
 $3x + 405 = 12x$ | -405
 $3x = 12x - 405$ | $-12x$
 $-9x = -405$ | $: -9$
 $x = 45$
- c) $21 + 4x = 2x + 5x$ | rearrange and combine like terms
 $4x + 21 = 7x$ | -21
 $4x = 7x - 21$ | $-7x$
 $-3x = -21$ | $: -3$
 $x = 7$
- d) $10x + 5 = 170 + 5$ | rearrange and combine like terms
 $10x + 5 = 175$ | -5
 $10x = 170$ | $: 10$
 $x = 17$

$$\begin{array}{l|l}
 \text{e) } -67 + 4 = -x - 8x & \text{rearrange and combine like terms} \\
 -63 = -9x & | +63 \\
 0 = -9x + 63 & | +9x \\
 9x = 63 & | : 9 \\
 x = 7 &
 \end{array}$$

4)

Solve the equation: Determine the value of the variable. Combine like terms and perform equivalent transformations.

Quick:
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$$\begin{array}{l|l}
 \text{a) } 11u - u = 2u + 88 & \text{rearrange and combine like terms} \\
 10u = 2u + 88 & | -2u \\
 8u = 88 & | : 8 \\
 u = 11 &
 \end{array}$$

$$\begin{array}{l|l}
 \text{b) } 5j - 2j = -4j + 119 & \text{rearrange and combine like terms} \\
 3j = -4j + 119 & | +4j \\
 7j = 119 & | : 7 \\
 j = 17 &
 \end{array}$$

$$\begin{array}{l|l}
 \text{c) } 2d - 4 = -316 + 8d & \text{rearrange and combine like terms} \\
 2d - 4 = 8d - 316 & | +4 \\
 2d = 8d - 312 & | -8d \\
 -6d = -312 & | : -6 \\
 d = 52 &
 \end{array}$$

Good Luck!