Worksheet

05/15/2020

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Problem quickname: 3102

1)

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

a) $11(v+2)-1+5v=5v+624+2v$
b) $-308-f+9(f+6)=f-4+2f$
c) $8(w+3)-7w+3w=56+3+1$
d) $-4d+10(d+7)-3d-3=304-3$
e) $10(b+5)-1+2=6b+66-3$

2)

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

a)
$$\begin{aligned} -628+4+7(w+12)&=2w+3w-4w && \mid \text{expand/multiply out paranthesis}\\ -\square+\square+\square w+\square&=2w+3w-4w && \mid \text{rearrange and combine like terms}\\ \square w-\square&=w && \mid +\square\\ \square w&=w+\square && \mid -\square\\ \square w&=\square && \mid :\square\\ w&=\square \end{aligned}$$

b)
$$\begin{aligned} -336+11(p+8)-10p&=-7p+4+4p && \mid \text{expand/multiply out paranthesis}\\ -\square+\square p+\square-\square p&=-7p+4+4p && \mid \text{rearrange and combine like terms}\\ p-\square&=-\square p+\square && \mid +\square\\ p&=-\square p+\square && \mid +\square\\ \square p&=\square && \mid :\square\\ p&=\square \end{aligned}$$

c)
$$\begin{aligned} 11(c+9)-325&=11c-2+4-3c && \mid \text{expand/multiply out paranthesis}\\ \square c+\square-\square&=11c-2+4-3c && \mid \text{rearrange and combine like terms}\\ \square c-\square&=\square c+\square && \mid +\square\\ \square c&=\square c+\square && \mid -\square\\ \square c&=\square && \mid :\square\\ c&=\square \end{aligned}$$

d)
$$\begin{aligned} 10(s+9)-125&=10s-3-4s+4 && \mid \text{expand/multiply out paranthesis}\\ \square s+\square-\square&=10s-3-4s+4 && \mid \text{rearrange and combine like terms}\\ \square s-\square&=\square s+\square && \mid +\square\\ \square s&=\square s+\square && \mid -\square\\ \square s&=\square && \mid :\square\\ s&=\square \end{aligned}$$

e) $-3k - 9k - 170 + 10(k+1) = -5k - 1$ | expand/multiply out paranthesis

$-\square k - \square k - \square + \square k + \square = -5k - 1$ | rearrange and combine like terms

$-\square k - \square = -\square k - \square$ | $+\square$

$-\square k = -\square k + \square$ | $+\square$

$\square k = \square$ | $: \square$

$k = \square$

3)

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

a) $7(d+10) - d = 228 + 4$ b) $10(s+4) - 197 = 7s - 1$

c) $10(r+9) - 266 = 10r - 4r$ d) $11(c+5) - 253 = 10c - 2c$

e) $11(z+7) + 4z = 10z + 107$

4)

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

a) $9(x+9) - 9x = 194 - 5 - 4x$ | expand/multiply out paranthesis

$\square x + \square - \square x = 194 - 5 - 4x$ | rearrange and combine like terms

$\square = -\square x + \square$ | $-\square$

$\square = -\square x + \square$ | $+\square$

$\square x = \square$ | $: \square$

$x = \square$

b) $9(x+10) - 254 + 4 = 4x + x$ | expand/multiply out paranthesis

$\square x + \square - \square + \square = 4x + x$ | rearrange and combine like terms

$\square x - \square = \square x$ | $+\square$

$\square x = \square x + \square$ | $-\square$

$\square x = \square$ | $: \square$

$x = \square$

c) $10(x+7) - 4x - 3 = 635 - 4$ | expand/multiply out paranthesis

$\square x + \square - \square x - \square = 635 - 4$ | rearrange and combine like terms

$\square x + \square = \square$ | $-\square$

$\square x = \square$ | $: \square$

$x = \square$

d) $5(x+18) - 311 - 4 = 4x - 2x$ | expand/multiply out paranthesis

$\square x + \square - \square - \square = 4x - 2x$ | rearrange and combine like terms

$\square x - \square = \square x$ | $+\square$

$\square x = \square x + \square$ | $-\square$

$\square x = \square$ | $: \square$

$x = \square$

e) $11(x+6)-119=5x+3-2$ | expand/multiply out paranthesis

$\square x+\square-\square=5x+3-2$ | rearrange and combine like terms

$\square x-\square=\square x+\square$ | $+\square$

$\square x=\square x+\square$ | $-\square$

$\square x=\square$ | $:\square$

$x=\square$

Good Luck!