Worksheet

05/15/2020

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Problem quickname: 9505

1)

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

a)
$$156 - 1 = 2f - 3 \qquad | \text{ rearrange and combine like terms}$$
$$155 = 2f - 3 \qquad | -155$$
$$0 = 2f - 158 \qquad | -2f$$
$$-2f = -158 \qquad | : \text{-}2$$
$$f = 79$$

b)
$$7q + 3 = 5 + 320 \qquad | \text{ rearrange and combine like terms}$$
$$7q + 3 = 325 \qquad | -3$$
$$7q = 322 \qquad | : 7$$
$$q = 46$$

c)
$$530 - 4h = 4h + 2h \qquad | \text{ rearrange and combine like terms}$$
$$-4h + 530 = 6h \qquad | -530$$
$$-4h = 6h - 530 \qquad | -6h$$
$$-10h = -530 \qquad | : \text{-}10$$
$$h = 53$$

2)

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

a) $319 + 3v = 12v - 5$ Lösung: $v = 36$ 　　b) $8s - 2s = 252 - 3s$ Lösung: $s = 28$

c) $3f + 6 = 4 + 44$ Lösung: $f = 14$ 　　d) $-4r + 44 = -3 + 3$ Lösung: $r = 11$

e) $-4z + 2 = -364 + 2$ Lösung: $z = 91$

f) $-e + 3e = 8e - 342$ Lösung: $e = 57$

g) $-6k - 6 = -4 - 410$ Lösung: $k = 68$ 　　h) $3q - 3 = 142 - 4$ Lösung: $q = 47$

i) $9n - 2 = -1 + 692$ Lösung: $n = 77$

3)

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

a)
$$-3 + 1 = -482 + 10u \qquad | \text{ rearrange and combine like terms}$$
$$-2 = 10u - 482 \qquad | +2$$
$$0 = 10u - 480 \qquad | -10u$$
$$-10u = -480 \qquad | : \text{-}10$$
$$u = 48$$

b) $-3b + 5 = -230 + 1$ | rearrange and combine like terms
$-3b + 5 = -229$ | -5
$-3b = -234$ | : -3
$b = 78$

c) $i + 5i = -243 + 9i$ | rearrange and combine like terms
$6i = 9i - 243$ | $-9i$
$-3i = -243$ | : -3
$i = 81$

d) $-5r - 3 = -1 - 202$ | rearrange and combine like terms
$-5r - 3 = -203$ | $+3$
$-5r = -200$ | : -5
$r = 40$

e) $-8d + 2 = -4 - 602$ | rearrange and combine like terms
$-8d + 2 = -606$ | -2
$-8d = -608$ | : -8
$d = 76$

f) $-6s - 2s = -161 + 1$ | rearrange and combine like terms
$-8s = -160$ | : -8
$s = 20$

g) $-3y + 203 = -7 + 3$ | rearrange and combine like terms
$-3y + 203 = -4$ | -203
$-3y = -207$ | : -3
$y = 69$

h) $-2p - 4p = -2 - 496$ | rearrange and combine like terms
$-6p = -498$ | : -6
$p = 83$

i) $-8f + 2 = 4 - 466$ | rearrange and combine like terms
$-8f + 2 = -462$ | -2
$-8f = -464$ | : -8
$f = 58$

4)

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

a) $-2r - 3 = -12r + 307$ | $+3$
$-2r = -12r + 310$ | $+12r$
$10r = 310$ | : 10
$r = 31$

b) $9g - 298 = -3 + 2$ | rearrange and combine like terms
$9g - 298 = -1$ | $+298$
$9g = 297$ | : 9
$g = 33$

c) $7w + w = 300 + 4$ | rearrange and combine like terms
     $8w = 304$ $| : 8$
     $w = 38$

d) $212 - 4p = -1 - p$ | rearrange and combine like terms
  $-4p + 212 = -p - 1$ $| -212$
     $-4p = -p - 213$ $| +1p$
     $-3p = -213$ $| : \text{-3}$
     $p = 71$

e) $234 - 4 = 9n - 4n$ | rearrange and combine like terms
    $230 = 5n$ $| -230$
     $0 = 5n - 230$ $| -5n$
   $-5n = -230$ $| : \text{-5}$
     $n = 46$

f) $2n + 2n = -1 + 361$ | rearrange and combine like terms
     $4n = 360$ $| : 4$
     $n = 90$

g) $10n + 4 = 4 + 920$ | rearrange and combine like terms
  $10n + 4 = 924$ $| -4$
   $10n = 920$ $| : 10$
     $n = 92$

h) $5c + 2c = 2c + 270$ | rearrange and combine like terms
     $7c = 2c + 270$ $| -2c$
     $5c = 270$ $| : 5$
     $c = 54$

i) $-5c + 147 = 1 + 1$ | rearrange and combine like terms
  $-5c + 147 = 2$ $| -147$
    $-5c = -145$ $| : \text{-5}$
     $c = 29$

Good Luck!