Solving Equations Worksheet

1) $4n - 2n = 4$

2) $-12 = 2 + 7v$

3) $6 = -3(x + 2)$

4) $24 = 6(-x - 3)$

5) $-1 = -3r + 2r$

6) $-3(4r - 8) = -36$

7) $75 = 3(-6n - 5)$

8) $-3(1 + 6r) = 14 - r$

9) $6(6v + 6) - 5 = 1 + 6v$

10) $-4k + 2(5k - 6) = -3k - 39$

11) $9p + 9 - 11 = -2(2p + 4) - 3(2p - 2)$

12) $-10n + 3(8 + 8n) = -6(n - 4)$

13) $10(x + 3) - (-9x - 4) = x - 5 + 3$

14) $-11 + 10(p + 10) = 4 - 5(2p + 11)$

Solving Equations Worksheet

1) $4n - 2n = 4$

$\frac{2n}{2} = \frac{4}{2}$

$n = 2$

- combine like terms
- Divide

2) $-12 = 2 + 7v$

$-2 \quad -2$

$\frac{-14}{7} = \frac{7v}{7}$

$v = -2$

- add/sub constants
- Divide

3) $6 = -3(x + 2)$

$6 = -3x - 6$

$+6 \quad +6$

$\frac{12}{-3} = \frac{-3x}{-3}$

$x = -4$

- Distribute
- add/sub. constants
- Divide

4) $24 = 6(-x - 3)$

$24 = -6x - 18$

$+18 \quad +18$

$\frac{42}{-6} = \frac{-6x}{-6}$

$x = -7$

- Distribute
- add/sub. constants
- Divide

5) $-1 = -3r + 2r$

$\frac{-1}{-1} = \frac{-1r}{-1}$

$r = 1$

- combine like terms
- Divide

6) $-3(4r - 8) = -36$

$-12r + 24 = -36$

$-24 \quad -24$

$\frac{-12r}{-12} = \frac{-60}{-12}$

$r = 5$

- Distribute
- add/sub. constants
- Divide

7) $75 = 3(-6n - 5)$

$75 = -18n - 15$

$+15 \quad +15$

$\frac{90}{-18} = \frac{-18n}{-18}$

$n = -5$

- Distribute
- add/sub. const.
- Divide

8) $-3(1 + 6r) = 14 - r$

$-3 - 18r = 14 - r$

$+r \quad +r$

$-3 - 17r = 14$

$+3 \quad +3$

$\frac{-17r}{-17} = \frac{17}{-17}$

$r = -1$

- Distribute
- add/sub. variables
- add/sub. const.
- Divide

9) $6(6v + 6) - 5 = 1 + 6v$

$36v + 36 - 5 = 1 + 6v$

$36v + 31 = 1 + 6v$

$-6v \quad -6v$

$30v + 31 = 1$

$-31 \quad -31$

$30v = -30$

$\frac{30v}{30} = \frac{-30}{30}$

$v = -1$

- Distribute
- combine like terms
- add/sub. var.
- add/sub. const.
- Divide

10) $-4k + 2(5k - 6) = -3k - 39$

$-4k + 10k - 12 = -3k - 39$

$6k - 12 = -3k - 39$

$+3k \quad +3k$

$9k - 12 = -39$

$+12 \quad +12$

$\frac{9k}{9} = \frac{-27}{9}$

$k = -3$

- Distribute
- Combine terms
- add/sub. var.
- add/sub. const.
- Divide

11) $9p + 9 - 11 = -2(2p + 4) - 3(2p - 2)$

$9p + 9 - 11 = -4p - 8 - 6p + 6$

$9p - 2 = -2p - 2$

$+2p \quad +2p$

$11p - 2 = -2$

$+2 \quad +2$

$\frac{11p}{11} = \frac{0}{11}$

$p = 0$

- Distribute
- Combine
- add/sub var.
- add/sub const.
- Divide

12) $-10n + 3(8 + 8n) = -6(n - 4)$

$-10n + 24 + 24n = -6n + 24$

$14n + 24 = -6n + 24$

$+6n \quad +6n$

$20n + 24 = 24$

$-24 \quad -24$

$\frac{20n}{20} = \frac{0}{20}$

$20n = 0$

$n = 0$

- Distribute
- combine
- add/sub var.
- add/sub const.
- Divide

13) $10(x + 3) - (-9x - 4) = x - 5 + 3$

$10x + 30 + 9x + 4 = x - 5 + 3$

$19x + 34 = x - 2$

$-x \quad -x$

$18x + 34 = -2$

$-34 \quad -34$

$\frac{18x}{18} = \frac{-36}{18}$

$x = -2$

- Distribute
- Combine
- add/sub. var.
- add/sub. const.
- Divide

14) $-11 + 10(p + 10) = 4 - 5(2p + 11)$

$-11 + 10p + 100 = 4 - 10p - 55$

$10p + 89 = -10p - 51$

$+10p \quad +10p$

$20p + 89 = -51$

$-89 \quad -89$

$\frac{20p}{20} = \frac{-140}{20}$

$p = -7$

- Distribute
- Combine
- add/sub var.
- add/sub. const.
- Divide