Answer Key: Page 3-4

Solve for the variable.

1. $j+50=157$
2. $9b=-118$
3. $\frac{40}{41}=\frac{1u}{5}$
4. $-9+x=21$
5. $x-\left(-\frac{1}{2}\right)=\frac{5}{10}$
6. $n+15.2=45$
7. $-20y=100$
8. $-.0024=.002x$
9. $\frac{8}{4}=\frac{4}{x}$
10. $5t-\frac{2}{3}=1$
11. $9\left(\frac{27}{3}x+1\right)=100$
12. $\frac{21n+15}{3}=49$
13. $\frac{b(.25+.25)}{.5}=25$
14. $9c+8=10c+3$

Solve for the variable.

15. $-.75-.05y=1.25+.95y$
16. $2(2x+5)=3x-17$
17. $5(5n+7)-20n=3(5n-3)$
18. $.75(100y-2)+.5=.25(400y-2)$
19. $\frac{3}{4}(4a+4)=\frac{1}{2}(20a-8)$
20. $\frac{2}{3}(9t-9)=\frac{1}{3}(15t+15)$
21. $7m+3m+2+5-2m=8m+2m-17$
22. $\frac{3}{4}\left(4x+\frac{4}{3}\right)=4x$
23. $7y+2(14y)-8=10(y-2)$

Solve for the specified variable.

24. $v = u - w + x;\ for\ x$

25. $x + (y + 1) = z;\ for\ y$

26. $9b + c = b;\ for\ c$

27. $a + \frac{b}{4} = \frac{4b}{2};\ for\ a$

28. $n = mp;\ for\ p$

29. $a = bc;\ for\ c$

30. $2B = a + B - c;\ for\ B$

31. $p = H^2h;\ for\ h$

32. $8n = 4\pi m;\ for\ m$

33. $-.25w^2 = .75w^2 + y;\ for\ y$

34. $h = \frac{rt^2}{7};\ for\ r$

35. $X = \frac{y^2z^2}{t};\ for\ t$

36. $e = (ct)(5f);\ for\ f$

Solve for the specified variable.

37. $R = \frac{r}{t};\ for\ t$

38. $4a + 4b = 20;\ for\ b$

39. $20w = .5u + 10;\ for\ w$

40. $3xy + 5 = xy;\ for\ y$

41. $10ab + 2 = ab - 3;\ for\ b$

42. $7rt - w = 21rt - z;\ for\ w$

43. $-7np - 9m = 2np + 3;\ for\ p$

44. $\frac{n}{m} - p = r;\ for\ n$

45. $15x - b = a + 5;\ for\ x$

46. $3Y = z + uv;\ for\ v$

47. $N = P(100 + AB);\ for\ B$

48. $Z = \frac{2}{100p}(c + b);\ for\ b$

Answer Key

Solve for the variable.

1. $j+50=157$ j=107
2. $9b=-118$ $b=-\frac{118}{9}$
3. $\frac{40}{41}=\frac{1u}{5}$ $u=\frac{200}{41}$
4. $-9+x=21$ x=30
5. $x-\left(-\frac{1}{2}\right)=\frac{5}{10}$ x=0
6. $n+15.2=45$ n=29.8
7. $-20y=100$ y= −5
8. $-.0024=.002x$ x= −1.2
9. $\frac{8}{4}=\frac{4}{x}$ x=2
10. $5t-\frac{2}{3}=1$ $t=\frac{1}{3}$
11. $9\left(\frac{27}{3}x+1\right)=100$ $x=\frac{91}{81}$
12. $\frac{21n+15}{3}=49$ $n=\frac{44}{7}$
13. $\frac{b(.25+.25)}{.5}=25$ b=25
14. $9c+8=10c+3$ c=5

Solve for the variable.

15. $-.75-.05y=1.25+.95y$ y= −2
16. $2(2x+5)=3x-17$ x= −27
17. $5(5n+7)-20n=3(5n-3)$ $n=\frac{22}{5}$
18. $.75(100y-2)+.5=.25(400y-2)$ y= −0.02
19. $\frac{3}{4}(4a+4)=\frac{1}{2}(20a-8)$ a=1
20. $\frac{2}{3}(9t-9)=\frac{1}{3}(15t+15)$ t=11
21. $7m+3m+2+5-2m=8m+2m-17$ m=12
22. $\frac{3}{4}\left(4x+\frac{4}{3}\right)=4x$ x=1
23. $7y+2(14y)-8=10(y-2)$ $y=-\frac{12}{25}$

Solve for the specified variable.

24. $v = u - w + x;\ for\ x$ x= −u +w +v

25. $x + (y + 1) = z;\ for\ y$ y= −x +z −1

26. $9b + c = b;\ for\ c$ c= −8b

27. $a + \frac{b}{4} = \frac{4b}{2};\ for\ a$ $a = \frac{7b}{4}$

28. $n = mp;\ for\ p$ $p = \frac{n}{m}$

29. $a = bc;\ for\ c$ $c = \frac{a}{b}$

30. $2B = a + B - c;\ for\ B$ B=a−c

31. $p = H^2h;\ for\ h$ $h = \frac{p}{H^2}$

32. $8n = 4\pi m;\ for\ m$ $m = \frac{2n}{\pi}$

33. $-.25w^2 = .75w^2 + y;\ for\ y$ y= −w²

34. $h = \frac{rt^2}{7};\ for\ r$ $r = \frac{7h}{t^2}$

35. $X = \frac{y^2z^2}{t};\ for\ t$ $t = \frac{y^2z^2}{X}$

36. $e = (ct)(5f);\ for\ f$ $f = \frac{e}{5ct}$

Solve for the specified variable.

37. $R = \frac{r}{t};\ for\ t$ $t = \frac{r}{R}$

38. $4a + 4b = 20;\ for\ b$ b= −a+5

39. $20w = .5u + 10;\ for\ w$ $w = \frac{.5u + 10}{20}$

40. $3xy + 5 = xy;\ for\ y$ $y = -\frac{5}{2x}$

41. $10ab + 2 = ab - 3;\ for\ b$ $b = -\frac{5}{9a}$

42. $7rt - w = 21rt - z;\ for\ w$
w= −14rt+z

43. $-7np - 9m = 2np + 3;\ for\ p$
$p = \frac{-3m - 1}{3n}$

44. $\frac{n}{m} - p = r;\ for\ n$ n=mp+mr

45. $15x - b = a + 5;\ for\ x$ $x = \frac{b + a + 5}{15}$

46. $3Y = z + uv;\ for\ v$ $v = \frac{-z + 3Y}{u}$

47. $N = P(100 + AB);\ for\ B$ $B = \frac{N - 100P}{AP}$

48. $Z = \frac{2}{100p}(c + b);\ for\ b$
b= 50zp − c