

Name: _____

Date: _____

Inverse operations: Answers

$$\begin{aligned}
 (1) \quad & 4(x+9) = 68 \\
 & \frac{4(x+9)}{4} = \frac{68}{4} \\
 & x+9 = 17 \\
 & x+9-9 = 17-9 \\
 & x = 8
 \end{aligned}$$

$$\begin{aligned}
 (6) \quad & \frac{x+1}{7} = 5 \\
 & \frac{x+1}{7} \times 7 = 5 \times 7 \\
 & x+1 = 35 \\
 & x+1-1 = 35-1 \\
 & x = 34
 \end{aligned}$$

$$\begin{aligned}
 (2) \quad & \frac{x}{3} + 6 = 10 \\
 & \frac{x}{3} + 6 - 6 = 10 - 6 \\
 & \frac{x}{3} = 4 \\
 & \frac{x}{3} \times 3 = 4 \times 3 \\
 & x = 12
 \end{aligned}$$

$$\begin{aligned}
 (7) \quad & 8x - 6 = 10 \\
 & 8x - 6 + 6 = 10 + 6 \\
 & 8x = 16 \\
 & \frac{8x}{8} = \frac{16}{8} \\
 & x = 2
 \end{aligned}$$

$$\begin{aligned}
 (3) \quad & \frac{x+5}{10} = 8 \\
 & \frac{x+5}{10} \times 10 = 8 \times 10 \\
 & x+5 = 80 \\
 & x+5-5 = 80-5 \\
 & x = 75
 \end{aligned}$$

$$\begin{aligned}
 (8) \quad & \frac{x}{5} - 2 = 7 \\
 & \frac{x}{5} - 2 + 2 = 7 + 2 \\
 & \frac{x}{5} = 9 \\
 & \frac{x}{5} \times 5 = 9 \times 5 \\
 & x = 45
 \end{aligned}$$

$$\begin{aligned}
 (4) \quad & \frac{x+7}{6} = 9 \\
 & \frac{x+7}{6} \times 6 = 9 \times 6 \\
 & x+7 = 54 \\
 & x+7-7 = 54-7 \\
 & x = 47
 \end{aligned}$$

$$\begin{aligned}
 (9) \quad & \frac{x+4}{10} = 10 \\
 & \frac{x+4}{10} \times 10 = 10 \times 10 \\
 & x+4 = 100 \\
 & x+4-4 = 100-4 \\
 & x = 96
 \end{aligned}$$

$$\begin{aligned}
 (5) \quad & 4x - 7 = 33 \\
 & 4x - 7 + 7 = 33 + 7 \\
 & 4x = 40 \\
 & \frac{4x}{4} = \frac{40}{4} \\
 & x = 10
 \end{aligned}$$

$$\begin{aligned}
 (10) \quad & \frac{x-2}{8} = 8 \\
 & \frac{x-2}{8} \times 8 = 8 \times 8 \\
 & x-2 = 64 \\
 & x-2+2 = 64+2 \\
 & x = 66
 \end{aligned}$$

$$\begin{aligned}
 (11) \quad & \frac{x}{7} + 5 = 11 \\
 & \frac{x}{7} + 5 - 5 = 11 - 5 \\
 & \frac{x}{7} = 6 \\
 & \frac{x}{7} \times 7 = 6 \times 7 \\
 & x = 42
 \end{aligned}$$

$$\begin{aligned}
 (12) \quad & 10(x - 6) = 30 \\
 & \frac{10(x - 6)}{10} = \frac{30}{10} \\
 & x - 6 = 3 \\
 & x - 6 + 6 = 3 + 6 \\
 & x = 9
 \end{aligned}$$

$$\begin{aligned}
 (13) \quad & 5x + 6 = 26 \\
 & 5x + 6 - 6 = 26 - 6 \\
 & 5x = 20 \\
 & \frac{5x}{5} = \frac{20}{5} \\
 & x = 4
 \end{aligned}$$

$$\begin{aligned}
 (14) \quad & 3(x - 2) = 3 \\
 & \frac{3(x - 2)}{3} = \frac{3}{3} \\
 & x - 2 = 1 \\
 & x - 2 + 2 = 1 + 2 \\
 & x = 3
 \end{aligned}$$

$$\begin{aligned}
 (15) \quad & \frac{x}{8} + 4 = 6 \\
 & \frac{x}{8} + 4 - 4 = 6 - 4 \\
 & \frac{x}{8} = 2 \\
 & \frac{x}{8} \times 8 = 2 \times 8 \\
 & x = 16
 \end{aligned}$$

$$\begin{aligned}
 (16) \quad & \frac{x - 1}{8} = 2 \\
 & \frac{x - 1}{8} \times 8 = 2 \times 8 \\
 & x - 1 = 16 \\
 & x - 1 + 1 = 16 + 1 \\
 & x = 9
 \end{aligned}$$

$$\begin{aligned}
 (17) \quad & 7x - 3 = 25 \\
 & 7x - 3 + 3 = 25 + 3 \\
 & 7x = 28 \\
 & \frac{7x}{7} = \frac{28}{7} \\
 & x = 4
 \end{aligned}$$

$$\begin{aligned}
 (18) \quad & \frac{x + 1}{6} = 10 \\
 & \frac{x + 1}{6} \times 6 = 10 \times 6 \\
 & x + 1 = 60 \\
 & x + 1 - 1 = 60 - 1 \\
 & x = 59
 \end{aligned}$$

$$\begin{aligned}
 (19) \quad & \frac{x}{9} - 3 = -1 \\
 & \frac{x}{9} - 3 + 3 = -1 + 3 \\
 & \frac{x}{9} = 2 \\
 & \frac{x}{9} \times 9 = 2 \times 9 \\
 & x = 18
 \end{aligned}$$

$$\begin{aligned}
 (20) \quad & 7(x - 5) = 14 \\
 & \frac{7(x - 5)}{7} = \frac{14}{7} \\
 & x - 5 = 2 \\
 & x - 5 + 5 = 2 + 5 \\
 & x = 7
 \end{aligned}$$

$$\begin{aligned}
(21) \quad & \frac{x-5}{5} = 2 \\
& \frac{x-5}{5} \times 5 = 2 \times 5 \\
& x-5 = 10 \\
& x-5+5 = 10+5 \\
& x = 30
\end{aligned}$$

$$\begin{aligned}
(22) \quad & 8(x-2) = 8 \\
& \frac{8(x-2)}{8} = \frac{8}{8} \\
& x-2 = 1 \\
& x-2+2 = 1+2 \\
& x = 3
\end{aligned}$$

$$\begin{aligned}
(23) \quad & \frac{x+3}{2} = 9 \\
& \frac{x+3}{2} \times 2 = 9 \times 2 \\
& x+3 = 18 \\
& x+3-3 = 18-3 \\
& x = 15
\end{aligned}$$

$$\begin{aligned}
(24) \quad & 10x+6 = 16 \\
& 10x+6-6 = 16-6 \\
& 10x = 10 \\
& \frac{10x}{10} = \frac{10}{10} \\
& x = 1
\end{aligned}$$

$$\begin{aligned}
(25) \quad & \frac{x}{10} + 10 = 15 \\
& \frac{x}{10} + 10 - 10 = 15 - 10 \\
& \frac{x}{10} = 5 \\
& \frac{x}{10} \times 10 = 5 \times 10 \\
& x = 50
\end{aligned}$$

$$\begin{aligned}
(26) \quad & \frac{x}{9} + 3 = 7 \\
& \frac{x}{9} + 3 - 3 = 7 - 3 \\
& \frac{x}{9} = 4 \\
& \frac{x}{9} \times 9 = 4 \times 9 \\
& x = 36
\end{aligned}$$

$$\begin{aligned}
(27) \quad & 2(x+7) = 30 \\
& \frac{2(x+7)}{2} = \frac{30}{2} \\
& x+7 = 15 \\
& x+7-7 = 15-7 \\
& x = 8
\end{aligned}$$

$$\begin{aligned}
(28) \quad & 2x-6 = 12 \\
& 2x-6+6 = 12+6 \\
& 2x = 18 \\
& \frac{2x}{2} = \frac{18}{2} \\
& x = 9
\end{aligned}$$

$$\begin{aligned}
(29) \quad & \frac{x-2}{5} = 4 \\
& \frac{x-2}{5} \times 5 = 4 \times 5 \\
& x-2 = 20 \\
& x-2+2 = 20+2 \\
& x = 22
\end{aligned}$$

$$\begin{aligned}
(30) \quad & \frac{x-8}{2} = 7 \\
& \frac{x-8}{2} \times 2 = 7 \times 2 \\
& x-8 = 14 \\
& x-8+8 = 14+8 \\
& x = 22
\end{aligned}$$

$$\begin{aligned}
(31) \quad & 5(x-5) = -10 \\
& \frac{5(x-5)}{5} = \frac{-10}{5} \\
& x-5 = -2 \\
& x-5+5 = -2+5 \\
& x = 3
\end{aligned}$$

$$\begin{aligned}
(32) \quad & \frac{x-4}{5} = 4 \\
& \frac{x-4}{5} \times 5 = 4 \times 5 \\
& x-4 = 20 \\
& x-4+4 = 20+4 \\
& x = 24
\end{aligned}$$

$$\begin{aligned}
(33) \quad & \frac{x}{6} + 10 = 15 \\
& \frac{x}{6} + 10 - 10 = 15 - 10 \\
& \frac{x}{6} = 5 \\
& \frac{x}{6} \times 6 = 5 \times 6 \\
& x = 30
\end{aligned}$$

$$\begin{aligned}
(34) \quad & \frac{x}{2} - 6 = -2 \\
& \frac{x}{2} - 6 + 6 = -2 + 6 \\
& \frac{x}{2} = 4 \\
& \frac{x}{2} \times 2 = 4 \times 2 \\
& x = 8
\end{aligned}$$

$$\begin{aligned}
(35) \quad & \frac{x}{5} - 4 = -1 \\
& \frac{x}{5} - 4 + 4 = -1 + 4 \\
& \frac{x}{5} = 3 \\
& \frac{x}{5} \times 5 = 3 \times 5 \\
& x = 15
\end{aligned}$$

$$\begin{aligned}
(36) \quad & \frac{x+2}{10} = 10 \\
& \frac{x+2}{10} \times 10 = 10 \times 10 \\
& x+2 = 100 \\
& x+2-2 = 100-2 \\
& x = 98
\end{aligned}$$

$$\begin{aligned}
(37) \quad & \frac{x+5}{7} = 10 \\
& \frac{x+5}{7} \times 7 = 10 \times 7 \\
& x+5 = 70 \\
& x+5-5 = 70-5 \\
& x = 65
\end{aligned}$$

$$\begin{aligned}
(38) \quad & \frac{x}{7} + 1 = 3 \\
& \frac{x}{7} + 1 - 1 = 3 - 1 \\
& \frac{x}{7} = 2 \\
& \frac{x}{7} \times 7 = 2 \times 7 \\
& x = 14
\end{aligned}$$

$$\begin{aligned}
(39) \quad & 7(x+9) = 119 \\
& \frac{7(x+9)}{7} = \frac{119}{7} \\
& x+9 = 17 \\
& x+9-9 = 17-9 \\
& x = 8
\end{aligned}$$

$$\begin{aligned}
(40) \quad & \frac{x+6}{3} = 10 \\
& \frac{x+6}{3} \times 3 = 10 \times 3 \\
& x+6 = 30 \\
& x+6-6 = 30-6 \\
& x = 24
\end{aligned}$$

$$\begin{aligned}
 (41) \quad & 9x - 4 = 77 \\
 & 9x - 4 + 4 = 77 + 4 \\
 & 9x = 81 \\
 & \frac{9x}{9} = \frac{81}{9} \\
 & x = 9
 \end{aligned}$$

$$\begin{aligned}
 (46) \quad & 7x - 8 = -1 \\
 & 7x - 8 + 8 = -1 + 8 \\
 & 7x = 7 \\
 & \frac{7x}{7} = \frac{7}{7} \\
 & x = 1
 \end{aligned}$$

$$\begin{aligned}
 (42) \quad & 4(x + 5) = 24 \\
 & \frac{4(x + 5)}{4} = \frac{24}{4} \\
 & x + 5 = 6 \\
 & x + 5 - 5 = 6 - 5 \\
 & x = 1
 \end{aligned}$$

$$\begin{aligned}
 (47) \quad & 2x - 2 = 4 \\
 & 2x - 2 + 2 = 4 + 2 \\
 & 2x = 6 \\
 & \frac{2x}{2} = \frac{6}{2} \\
 & x = 3
 \end{aligned}$$

$$\begin{aligned}
 (43) \quad & \frac{x}{9} - 3 = 6 \\
 & \frac{x}{9} - 3 + 3 = 6 + 3 \\
 & \frac{x}{9} = 9 \\
 & \frac{x}{9} \times 9 = 9 \times 9 \\
 & x = 81
 \end{aligned}$$

$$\begin{aligned}
 (48) \quad & \frac{x + 1}{10} = 1 \\
 & \frac{x + 1}{10} \times 10 = 1 \times 10 \\
 & x + 1 = 10 \\
 & x + 1 - 1 = 10 - 1 \\
 & x = 9
 \end{aligned}$$

$$\begin{aligned}
 (44) \quad & \frac{x}{9} - 4 = 6 \\
 & \frac{x}{9} - 4 + 4 = 6 + 4 \\
 & \frac{x}{9} = 10 \\
 & \frac{x}{9} \times 9 = 10 \times 9 \\
 & x = 90
 \end{aligned}$$

$$\begin{aligned}
 (49) \quad & 2(x + 4) = 26 \\
 & \frac{2(x + 4)}{2} = \frac{26}{2} \\
 & x + 4 = 13 \\
 & x + 4 - 4 = 13 - 4 \\
 & x = 9
 \end{aligned}$$

$$\begin{aligned}
 (45) \quad & \frac{x + 3}{2} = 3 \\
 & \frac{x + 3}{2} \times 2 = 3 \times 2 \\
 & x + 3 = 6 \\
 & x + 3 - 3 = 6 - 3 \\
 & x = 3
 \end{aligned}$$

$$\begin{aligned}
 (50) \quad & \frac{x}{5} + 9 = 18 \\
 & \frac{x}{5} + 9 - 9 = 18 - 9 \\
 & \frac{x}{5} = 9 \\
 & \frac{x}{5} \times 5 = 9 \times 5 \\
 & x = 45
 \end{aligned}$$

$$\begin{aligned}
(51) \quad & \frac{x+3}{4} = 6 \\
& \frac{x+3}{4} \times 4 = 6 \times 4 \\
& x+3 = 24 \\
& x+3-3 = 24-3 \\
& x = 21
\end{aligned}$$

$$\begin{aligned}
(52) \quad & 9x - 4 = 5 \\
& 9x - 4 + 4 = 5 + 4 \\
& 9x = 9 \\
& \frac{9x}{9} = \frac{9}{9} \\
& x = 1
\end{aligned}$$

$$\begin{aligned}
(53) \quad & \frac{x+3}{2} = 5 \\
& \frac{x+3}{2} \times 2 = 5 \times 2 \\
& x+3 = 10 \\
& x+3-3 = 10-3 \\
& x = 7
\end{aligned}$$

$$\begin{aligned}
(54) \quad & \frac{x+2}{9} = 7 \\
& \frac{x+2}{9} \times 9 = 7 \times 9 \\
& x+2 = 63 \\
& x+2-2 = 63-2 \\
& x = 61
\end{aligned}$$

$$\begin{aligned}
(55) \quad & \frac{x}{2} + 10 = 13 \\
& \frac{x}{2} + 10 - 10 = 13 - 10 \\
& \frac{x}{2} = 3 \\
& \frac{x}{2} \times 2 = 3 \times 2 \\
& x = 6
\end{aligned}$$

$$\begin{aligned}
(56) \quad & 2x + 9 = 23 \\
& 2x + 9 - 9 = 23 - 9 \\
& 2x = 14 \\
& \frac{2x}{2} = \frac{14}{2} \\
& x = 7
\end{aligned}$$

$$\begin{aligned}
(57) \quad & \frac{x}{7} + 7 = 9 \\
& \frac{x}{7} + 7 - 7 = 9 - 7 \\
& \frac{x}{7} = 2 \\
& \frac{x}{7} \times 7 = 2 \times 7 \\
& x = 14
\end{aligned}$$

$$\begin{aligned}
(58) \quad & 8x + 6 = 38 \\
& 8x + 6 - 6 = 38 - 6 \\
& 8x = 32 \\
& \frac{8x}{8} = \frac{32}{8} \\
& x = 4
\end{aligned}$$

$$\begin{aligned}
(59) \quad & \frac{x}{7} - 10 = -1 \\
& \frac{x}{7} - 10 + 10 = -1 + 10 \\
& \frac{x}{7} = 9 \\
& \frac{x}{7} \times 7 = 9 \times 7 \\
& x = 63
\end{aligned}$$

$$\begin{aligned}
(60) \quad & \frac{x}{9} - 5 = 0 \\
& \frac{x}{9} - 5 + 5 = 0 + 5 \\
& \frac{x}{9} = 5 \\
& \frac{x}{9} \times 9 = 5 \times 9 \\
& x = 45
\end{aligned}$$

$$\begin{aligned}
 (61) \quad & 10(x - 8) = 10 \\
 & \frac{10(x - 8)}{10} = \frac{10}{10} \\
 & x - 8 = 1 \\
 & x - 8 + 8 = 1 + 8 \\
 & x = 9
 \end{aligned}$$

$$\begin{aligned}
 (62) \quad & 4(x + 7) = 48 \\
 & \frac{4(x + 7)}{4} = \frac{48}{4} \\
 & x + 7 = 12 \\
 & x + 7 - 7 = 12 - 7 \\
 & x = 5
 \end{aligned}$$

$$\begin{aligned}
 (63) \quad & 7(x - 3) = 21 \\
 & \frac{7(x - 3)}{7} = \frac{21}{7} \\
 & x - 3 = 3 \\
 & x - 3 + 3 = 3 + 3 \\
 & x = 6
 \end{aligned}$$

$$\begin{aligned}
 (64) \quad & \frac{x}{3} - 3 = 7 \\
 & \frac{x}{3} - 3 + 3 = 7 + 3 \\
 & \frac{x}{3} = 10 \\
 & \frac{x}{3} \times 3 = 10 \times 3 \\
 & x = 30
 \end{aligned}$$

$$\begin{aligned}
 (65) \quad & 8x + 3 = 19 \\
 & 8x + 3 - 3 = 19 - 3 \\
 & 8x = 16 \\
 & \frac{8x}{8} = \frac{16}{8} \\
 & x = 2
 \end{aligned}$$

$$\begin{aligned}
 (66) \quad & \frac{x}{5} - 8 = -4 \\
 & \frac{x}{5} - 8 + 8 = -4 + 8 \\
 & \frac{x}{5} = 4 \\
 & \frac{x}{5} \times 5 = 4 \times 5 \\
 & x = 20
 \end{aligned}$$

$$\begin{aligned}
 (67) \quad & 2(x - 10) = -4 \\
 & \frac{2(x - 10)}{2} = \frac{-4}{2} \\
 & x - 10 = -2 \\
 & x - 10 + 10 = -2 + 10 \\
 & x = 8
 \end{aligned}$$

$$\begin{aligned}
 (68) \quad & 6x - 9 = 51 \\
 & 6x - 9 + 9 = 51 + 9 \\
 & 6x = 60 \\
 & \frac{6x}{6} = \frac{60}{6} \\
 & x = 10
 \end{aligned}$$

$$\begin{aligned}
 (69) \quad & 9x - 6 = 75 \\
 & 9x - 6 + 6 = 75 + 6 \\
 & 9x = 81 \\
 & \frac{9x}{9} = \frac{81}{9} \\
 & x = 9
 \end{aligned}$$

$$\begin{aligned}
 (70) \quad & \frac{x}{9} - 3 = 7 \\
 & \frac{x}{9} - 3 + 3 = 7 + 3 \\
 & \frac{x}{9} = 10 \\
 & \frac{x}{9} \times 9 = 10 \times 9 \\
 & x = 90
 \end{aligned}$$

$$\begin{aligned}
(71) \quad & \frac{x+3}{8} = 9 \\
& \frac{x+3}{8} \times 8 = 9 \times 8 \\
& x+3 = 72 \\
& x+3-3 = 72-3 \\
& x = 69
\end{aligned}$$

$$\begin{aligned}
(72) \quad & \frac{x}{7} + 3 = 13 \\
& \frac{x}{7} + 3 - 3 = 13 - 3 \\
& \frac{x}{7} = 10 \\
& \frac{x}{7} \times 7 = 10 \times 7 \\
& x = 70
\end{aligned}$$

$$\begin{aligned}
(73) \quad & \frac{x}{5} - 2 = 3 \\
& \frac{x}{5} - 2 + 2 = 3 + 2 \\
& \frac{x}{5} = 5 \\
& \frac{x}{5} \times 5 = 5 \times 5 \\
& x = 25
\end{aligned}$$

$$\begin{aligned}
(74) \quad & 7x + 7 = 42 \\
& 7x + 7 - 7 = 42 - 7 \\
& 7x = 35 \\
& \frac{7x}{7} = \frac{35}{7} \\
& x = 5
\end{aligned}$$

$$\begin{aligned}
(75) \quad & \frac{x+10}{6} = 4 \\
& \frac{x+10}{6} \times 6 = 4 \times 6 \\
& x+10 = 24 \\
& x+10-10 = 24-10 \\
& x = 14
\end{aligned}$$

$$\begin{aligned}
(76) \quad & \frac{x}{5} - 3 = 2 \\
& \frac{x}{5} - 3 + 3 = 2 + 3 \\
& \frac{x}{5} = 5 \\
& \frac{x}{5} \times 5 = 5 \times 5 \\
& x = 25
\end{aligned}$$

$$\begin{aligned}
(77) \quad & \frac{x+5}{8} = 4 \\
& \frac{x+5}{8} \times 8 = 4 \times 8 \\
& x+5 = 32 \\
& x+5-5 = 32-5 \\
& x = 27
\end{aligned}$$

$$\begin{aligned}
(78) \quad & 6x - 8 = 34 \\
& 6x - 8 + 8 = 34 + 8 \\
& 6x = 42 \\
& \frac{6x}{6} = \frac{42}{6} \\
& x = 7
\end{aligned}$$

$$\begin{aligned}
(79) \quad & \frac{x-9}{9} = 5 \\
& \frac{x-9}{9} \times 9 = 5 \times 9 \\
& x-9 = 45 \\
& x-9+9 = 45+9 \\
& x = 90
\end{aligned}$$

$$\begin{aligned}
(80) \quad & \frac{x+10}{8} = 4 \\
& \frac{x+10}{8} \times 8 = 4 \times 8 \\
& x+10 = 32 \\
& x+10-10 = 32-10 \\
& x = 22
\end{aligned}$$