

Solve each of the following equations:

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|------------------------------|--------------------------|---------------------------|--------------------------|
| 1. a) $x-3=7$                | b) $a-2=3$               | c) $x-2=2$                | d) $x-3=6$               |
| e) $x+2=5$                   | f) $y+6=6$               | g) $1+x=4$                | h) $2+a=-2$              |
| 2. a) $4x=12$                | b) $6x=24$               | c) $3a=3$                 | d) $2x=16$               |
| e) $-5t=45$                  | f) $-3y=-9$              | g) $-p=16$                | h) $-y=-12$              |
| 3. a) $\frac{x}{2}=3$        | b) $\frac{a}{3}=4$       | c) $\frac{1}{2}x=7$       | d) $\frac{1}{3}y=8$      |
| e) $\frac{a}{3}=-2$          | f) $\frac{1}{4}b=-3$     | g) $-\frac{y}{4}=-4$      | h) $\frac{-d}{5}=-2$     |
| 4. a) $2x+3=13$              | b) $5x+7=22$             | c) $6y+5=41$              | d) $4x-5=-17$            |
| e) $6y-4=20$                 | f) $7n+6=6$              | g) $12-y=16$              | h) $11-6p=-49$           |
| 5. a) $7x=6$                 | b) $-5x=7$               | c) $10x=-6$               | d) $-9m=-12$             |
| e) $5x+4=7$                  | f) $4x-3=7$              | g) $3+10x=-22$            | h) $1-8a=-5$             |
| 6. a) $\frac{2x}{3}=12$      | b) $\frac{5x}{-4}=-65$   | c) $\frac{-6x}{7}=-18$    | d) $\frac{-7y}{-6}=-28$  |
| e) $\frac{7x}{2}=3$          | f) $\frac{3x}{4}=2$      | g) $\frac{21x}{-2}=7$     | h) $\frac{8a}{3}=-6$     |
| 7. a) $\frac{x+3}{7}=6$      | b) $\frac{x-5}{3}=8$     | c) $\frac{a-4}{9}=-3$     | d) $\frac{x+1}{-7}=1$    |
| e) $\frac{5-x}{3}=-7$        | f) $\frac{7x-6}{4}=9$    | g) $\frac{4x+5}{-3}=13$   | h) $\frac{7-2x}{-5}=-13$ |
| 8. a) $3x-5=-26$             | b) $5(x-6)=-15$          | c) $-3(n+2)=12$           |                          |
| d) $5(x-2)-3=42$             | e) $3(2x+1)=-9$          | f) $3(2t+8)=0$            |                          |
| 9. a) $\frac{x-1}{3}+5=14$   | b) $\frac{3x+5}{4}+1=12$ | c) $\frac{7x-10}{9}-1=-6$ |                          |
| d) $\frac{4-x}{5}+12=0$      | e) $\frac{11-5x}{6}+1=7$ | f) $\frac{2(x-3)}{4}+5=5$ |                          |
| 10. Solve <i>and check</i> . |                          |                           |                          |
| a) $3x-4=23$                 | b) $2m+5=-21$            | c) $-5a-7=-62$            |                          |
| d) $8y+3=-37$                | e) $2(3x-5)=32$          | f) $5(3x+4)=-10$          |                          |
| g) $9x-(4x+7)=28$            | h) $4x-7(7x-8)=-34$      | i) $4(x-3)+9x=-38$        |                          |

**Answers:**

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| 1. 10, 5, 4, 9, 3, 0, 3, -4  | 2. 3, 4, 1, 8, -9, 3, -16, 12  |
| 3. 6, 12, 14, 24, -6, -12, 16, 10  | 4. 5, 3, 6, -3, 4, 0, -4, 10   |
| 5. $\frac{6}{7}, -\frac{7}{5}, -\frac{3}{5}, \frac{4}{3}, \frac{3}{5}, \frac{5}{2}, -\frac{5}{2}, \frac{3}{4}$ | 6. 18, 52, 21, -24, $\frac{6}{7}, \frac{8}{3}, -\frac{2}{3}, -\frac{9}{4}$ |
| 7. 39, 29, -23, -8, 26, 6, -11, -29  | 8. -7, 3, -6, 11, -2, -4   |
| 9. 28, 13, -5, 64, -5, 3   |  |