Warm-up:

If $4x = 20$ what is x? $\frac{4x}{4} = \frac{20}{4}$ $x = 5$

If $x + 7 = 12$ what is x? $-7 \quad -7$ $x = 5$

If $\frac{x}{2} = 20$ what is x? $2 \cdot \frac{x}{2} = 20 \cdot 2$ $x = 40$

Inverse Operations:

Opposite

Multiplying ⟷ dividing

Adding ⟷ subtracting

Solving for unknown quantities:

1. $\frac{7x}{7} = \frac{56}{7}$

$x = 8$

2. $\frac{3r}{3} = \frac{15}{3}$

$r = 5$

3. $p - 7 = 29$

$+7 \quad +7$

$p = 36$

4. $-4 = k + 9$

$-9 \quad -9$

$-13 = k$

$k = -13$

Sec1	$\frac{4t}{4}=\frac{3}{4}$ Notes 1-1 Solving Equations	Unit 1

5. $-\frac{1}{4}t=\frac{3}{20}$

$-\frac{1}{4}$ $-\frac{1}{4}$

$t=-\frac{3}{5}$

6. $+u=1$

-1 -1

$u=-1$

7. $\frac{x}{3}=8\cdot 3$

$x=24$

8. $-1.5t=8.1$

-1.5 -1.5

$t=-5.4$

9. $y-14=6$

$+14$ $+14$

$y=20$

10. $3+h=4$

-3 -3

$h=1$

11. $\frac{g}{-3}=-9\cdot -3$

$g=27$

$2=w+1$

-1 -1

12. $-\frac{2}{3}=w+\frac{1}{4}$

$-\frac{1}{4}$ $-\frac{1}{4}$

$-\frac{11}{12}=w$

$w=-\frac{11}{12}$

Bonus:

13. $12-c=10$

-12 -12

$\frac{-c}{-1}=\frac{-2}{-1}$

$c=2$

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Two-Step Equations

Add or Subtract 1. Get non x's on the same side

Multiply or divide 2. Get x alone

1. $9x-8=10$

$+8 \quad +8$

$\frac{9x}{9}=\frac{18}{9}$

$\boxed{x=2}$

2. $6x-12=18$

$+12 \quad +12$

$\frac{6x}{6}=\frac{30}{6}$

$\boxed{x=5}$

3. $5s+7=2$

4. $9=2w-7$

$+7 \quad +7$

$\frac{16}{2}=\frac{2w}{2}$

$8=w$

$\boxed{w=8}$

5. $6-3r=18$

$-6 \quad -6$

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

$\boxed{r=-4}$

6. $9=9t-18$

7. $-4g+8=32$

8. $6y-3.5=2.1$

9. $7=-6h+1$

10. $11=-7+9w$