

## 2.6 Algebraic Proofs

Write a 2-column proof.

Name \_\_\_\_\_

1. Given:  $3x - 2 = x - 8$   
Prove:  $x = -3$

1. $3x - 2 = x - 8$	1.
2. $2x - 2 = -8$	2.
3.	3. Addition
4. $x = -3$	4.

2. Given:  $\frac{3}{5}x = -9$   
Prove:  $x = -15$

1. $\frac{3}{5}x = -9$	1.
2. $3x = -45$	2.
3.	3.

3. Given:  $2(x - 3) = 8$   
Prove:  $x = 7$


4. Given:  $3x - 4 = \frac{1}{2}x + 6$   
Prove:  $x = 4$


5. Given:  $4x - 8 = -8$   
Prove:  $x = 0$

6. Given:  $-\frac{1}{2}x = 9$   
Prove:  $x = -18$

7. Given:  $2x - 7 = \frac{1}{3}x - 2$   
Prove:  $3 = x$

8. Given:  $\frac{x}{6} - 2 = -5$   
Prove:  $x = -18$

9. Given:  $\frac{3x+5}{2} = 7$   
Prove:  $x = 3$

10. Given:  $4 - \frac{1}{2}x = \frac{7}{2} - x$   
Prove:  $-1 = x$