

1) GIVEN:
 $-18 = -4x - 6$
 PROVE:
 $x = 3$

| STATEMENT | REASON |
|--------------------|--------------|
| 1) $-18 = -4x - 6$ | 1) Given |
| 2) $-12 = -4x$ | 2) Add. |
| 3) $3 = x$ | 3) Division |
| 4) $x = 3$ | 4) Symmetric |

2) GIVEN:
 $8x - 2 = -9 + 7x$
 PROVE:
 $x = -7$

| STATEMENT | REASON |
|-----------------------|--------------------|
| 1) $8x - 2 = -9 + 7x$ | 1) Given |
| 2) $8x + 7 = 7x$ | 2) Add. |
| 3) $7 = -x$ | 3) Subtrn |
| 4) $-7 = x$ | 4) Mult. (or Div.) |
| 5) $x = -7$ | 5) Symmetric |

3) GIVEN:
 $a + 5 = -5a + 5$
 PROVE:
 $x = 0$

| STATEMENT | REASON |
|----------------------|-----------|
| 1) $a + 5 = -5a + 5$ | 1) Given |
| 2) $6a + 5 = 5$ | 2) Add. |
| 3) $6a = 0$ | 3) Subtrn |
| 4) $a = 0$ | 4) Div. |

4) GIVEN:
 $5x - 14 = 8x + 4$
 PROVE:
 $x = -6$

| STATEMENT | REASON |
|-----------------------|-----------|
| 1) $5x - 14 = 8x + 4$ | 1) Given |
| 2) $-3x - 14 = 4$ | 2) Subtrn |
| 3) $-3x = 18$ | 3) Add. |
| 4) $x = -6$ | 4) Div. |

5) GIVEN:
 $12 = -4(-6x - 3)$
 PROVE:
 $x = 0$

| STATEMENT | REASON |
|-----------------------|--------------|
| 1) $12 = -4(-6x - 3)$ | 1) Given |
| 2) $12 = 24x + 12$ | 2) Dist. |
| 3) $0 = 24x$ | 3) Subtrn |
| 4) $0 = x$ | 4) Div. |
| 5) $x = 0$ | 5) Symmetric |

6) GIVEN:
 $3x - 5 = -8(6 + 5x)$
 PROVE:
 $x = -1$

| STATEMENT | REASON |
|--------------------------|----------|
| 1) $3x - 5 = -8(6 + 5x)$ | 1) Given |
| 2) $3x - 5 = -48 - 40x$ | 2) Dist. |
| 3) $43x - 5 = -48$ | 3) Add. |
| 4) $43x = -43$ | 4) Add. |
| 5) $x = -1$ | 5) Div. |