

Intro to Proofs With Algebra Notes

Given: $4(x+y)=48$; $y=6$

Prove: $x=6$

Given: $2(4-x)-5x=78$

Prove: $x=-10$

Steps

Reasons

Steps

Reasons

1) $4(x+y)=48$

Given

1) $2(4-x)-5x=78$

1) Given

2) $y=6$

Given

2) $8-2x-5x=78$

2) Distribute

3) $4x+4y=48$

Distribute

3) $8-7x=78$

3) Combine like terms

4) $4x+4(6)=48$

Substitution

4) $-7x=70$

4) Subtraction

5) $4x=24$

Subtraction

5) $x=-10$

5) Division

6) $x=6$

Division

Given: $5x-3=52$

Prove: $x=11$

Given: $-6(x-2)+4(3-6x)=-36$

Prove: $x=2$

Steps

Reasons

Steps

Reasons

1) $5x-3=52$

Given

1) $-6(x-2)+4(3-6x)=-36$

Given

2) $5x=55$

Addition

2) $-6x+12+12-24x=-36$

Distribute

3) $x=11$

Division

3) $-30x+24=-36$

Combine like terms

4) $-30x=-60$

Subtraction

5) $x=2$

Division