

Support each statement by writing a conclusion with a valid reason.

1. Given: $2x - 10 = 72$

2. Given: $6x = 12$

3. Given: D is the midpoint of \overline{EF}

Conclusion: _____

Conclusion: _____

Conclusion: _____

Reason: _____

Reason: _____

Reason: _____

Directions: Complete the following proofs.

Given: $2x + 4 = 12$

Prove: $x = 4$

Proof #1

Statement	Reason
1.	1.
2.	2.
3.	3.

Given: $11 - x = 11$

Prove: $x = 0$

Proof #2

Statement	Reason
1.	1.
2.	2.
3.	3.

Given: $4x - 23 = 2 - x$

Prove: $x = 5$

Proof #3

Statement	Reason
1.	1.
2.	2.
3.	3.
4.	4.

Given: $7x - (3x - 1) = -3$

Prove: $x = -1$

Proof #4

Statement	Reason
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.

Given: $26 - 8(x - 2) + 4 = 30$

Prove: $x = 2$

Proof #5

Statement	Reason
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.
6.	6.

[2.3 : WRITING PROOFS CORRECTIVE ASSIGNMENT]

Support each statement by writing a conclusion with a valid reason.

1. Given: $2x - 10 = 72$

Conclusion: $2x = 82$

Reason: Addition Property

2. Given: $6x = 12$

Conclusion: $x = 2$

Reason: Division Property

3. Given: D is the midpoint of \overline{EF}

Conclusion: $ED = DF$

Reason: Def of Mdpt.

Directions: Complete the following proofs.

Given: $2x + 4 = 12$

Prove: $x = 4$

Proof #1

Statement	Reason
1. $2x + 4 = 12$	1. Given
2. $2x = 12$	2. Subtraction Property
3. $x = 6$	3. Division Property

Given: $11 - x = 11$

Prove: $x = 0$

Proof #2

Statement	Reason
1. $11 - x = 11$	1. Given
2. $-x = 0$	2. Subtraction Property
3. $x = 0$	3. Division Property

Given: $4x - 23 = 2 - x$

Prove: $x = 5$

Proof #3

Statement	Reason
1. $4x - 23 = 2 - x$	1. Given
2. $5x - 23 = 2$	2. Addition Property
3. $5x = 25$	3. Addition Property
4. $x = 5$	4. Division Property

Given: $7x - (3x - 1) = -3$

Prove: $x = -1$

Proof #4

Statement	Reason
1. $7x - (3x - 1) = -3$	1. Given
2. $7x - 3x + 1 = -3$	2. Distributive Property
3. $4x + 1 = -3$	3. Combine Like Terms
4. $4x = -4$	4. Subtraction Property
5. $x = -1$	5. Division Property

Given: $26 - 8(x - 2) + 4 = 30$

Prove: $x = 2$

Proof #5

Statement	Reason
1. $26 - 8(x - 2) + 4 = 30$	1. Given
2. $26 - 8x + 16 + 4 = 30$	2. Distributive Property
3. $46 - 8x = 30$	3. Combine Like Terms
4. $-8x = -16$	4. Subtraction Property
5. $x = 2$	5. Division Property
6.	6.