

CCA2 Review

1. Highlight the correct response for the missing reason for STEP 2 in the algebraic proof below.

Given: $3x - 2(x + 1) = 23$

Prove: $x = 25$

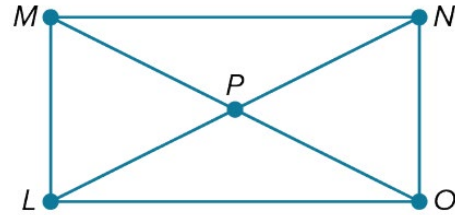
Statements	Reasons
1. $3x - 2(x + 1) = 23$	1. Given
2. $3x - 2x - 2 = 23$	2. <u>Choose One:</u> • Addition Property of Equality • Subtraction Property of Equality • Distributive Property • Combine like terms / Simplify
3. $x - 2 = 23$	3. Combine like terms / Simplify
4. $x = 25$	4. Addition Property of Equality

2. Highlight the correct response for the missing reason in STEP 6 the geometric proof below.

Given:

- $\overline{MP} \cong \overline{LP}$
- $\overline{LN} \cong \overline{MO}$

Prove: $PN = PO$



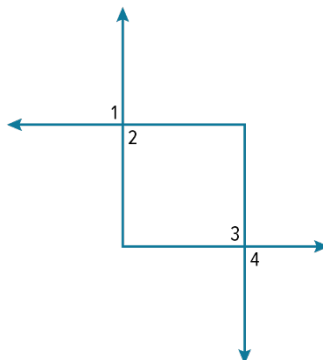
Statements	Reasons
1. $\overline{MP} \cong \overline{LP}; \overline{LN} \cong \overline{MO}$	1. Given
2. $MP = LP; LN = MO$	2. Definition of Congruent
3. $MO = MP + PO; LN = LP + PN$	3. Segment Addition Postulate
4. $LP + PN = MP + PO$	4. Substitution Property of Equality
5. $LP + PN = LP + PO$	5. Substitution Property of Equality
6. $PN = PO$	6. Choose One: • Definition of Congruent • Segment Addition Postulate • Subtraction Property of Equality • Substitution Property of Equality • Reflexive Property of Equality

3. **Level 3:** Highlight the correct responses for the missing reasons for STEP #4 & #7 in the geometric proof below.

Given:

- $\angle 1 \cong \angle 3$
- $m\angle 3 = 90^\circ$

Prove: $\angle 2$ & $\angle 4$ are supplementary.



Statements	Reasons
1. $\angle 1 \cong \angle 3$; $m\angle 3 = 90^\circ$	1. Given
2. $m\angle 1 = m\angle 3$	2. Definition of Congruent
3. $m\angle 1 = 90^\circ$	3. Substitution Property of Equality
4. $m\angle 1 = m\angle 2$; $m\angle 3 = m\angle 4$	4. Choose One: • Symmetric Property of Equality • Transitive Property of Equality • Reflexive Property of Equality • Vertical angles are Congruent • Vertical angles are Complementary
5. $m\angle 2 = 90^\circ$; $m\angle 4 = 90^\circ$	5. Substitution Property of Equality
6. $m\angle 2 + m\angle 4 = 180^\circ$	6. Angle Addition Postulate
7. $\angle 2$ & $\angle 4$ are supplementary	7. Choose One: • Definition of Congruent • Definition of Supplementary • Definition of Vertical Angles • Substitution Property of Equality

4. **Level 4:** Highlight the correct responses for the missing statements or reasons in the geometric proof below.

Given:

- X , Y , and Z are collinear.
- Y is between X and Z .
- $XY = 2x + 2$
- $YZ = 5x - 3$
- $XZ = 34$

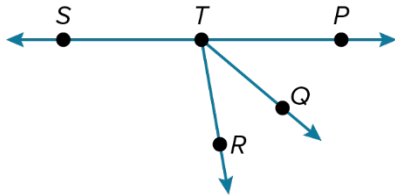
Prove: $YZ = 22$

Statements	Reasons
1. X , Y , and Z are collinear; Y is between X and Z .	1. Given
2. $XZ = XY + YZ$	2. Choose One: • Addition Property of Equality • Segment Addition Property • Substitution Property of Equality • Transitive Property of Equality
3. $XY = 2x + 2$; $YZ = 5x - 3$; $XZ = 34$	3. Given
4. $2x + 2 + 5x - 3 = 34$	4. Choose One: • Addition Property of Equality • Segment Addition Property • Substitution Property of Equality • Transitive Property of Equality
5. Choose One: • $7x - 5 = 34$ • $7x - 1 = 34$ • $3x - 5 = 34$ • $3x - 1 = 34$	5. Combine Like Terms / Simplify
6. $7x = 35$	6. Choose One: • Addition Property of Equality • Subtraction Property of Equality • Multiplication Property of Equality • Division Property of Equality

[continued on next page]

Statements	Reasons
7. <u>Choose One:</u> • $x = 3$ • $x = 4$ • $x = 5$ • $x = 6$ • $x = 7$	7. Division Property of Equality
8. $YZ = 5(5) - 3$	8. <u>Choose One:</u> • Addition Property of Equality • Multiplication Property of Equality • Substitution Property of Equality • Transitive Property of Equality • Combine Like Terms/Simplify
9. $YZ = 22$	9. <u>Choose One:</u> • Addition Property of Equality • Multiplication Property of Equality • Substitution Property of Equality • Transitive Property of Equality • Combine Like Terms/Simplify

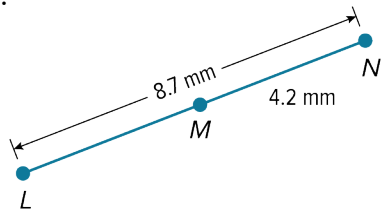
5. Consider the figure below.



Identify the pair of opposite rays.

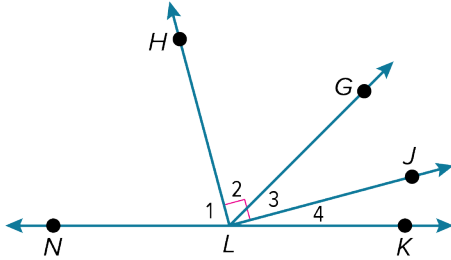
- A. $\overrightarrow{TR}$ & $\overrightarrow{TP}$
- B. $\overrightarrow{TQ}$ & $\overrightarrow{TP}$
- C. $\overrightarrow{TS}$ & $\overrightarrow{TP}$
- D. $\overrightarrow{TR}$ & $\overrightarrow{TS}$

6. Find the measure of $\overline{LM}$.



- $LM =$ _____

7. Consider the figure below.



If $m\angle NLH = (3x + 5)^\circ$ and $m\angle JLK = (6x - 23)^\circ$, find $m\angle NLH$ and $m\angle JLK$.

- $m\angle NLH = \underline{\hspace{2cm}}$

- $m\angle JLK = \underline{\hspace{2cm}}$

8. Find the coordinates of the missing endpoint, C , if B is the midpoint of $\overline{AC}$ and if $A(2,1)$ and $B(10,4)$

- The coordinates of the missing endpoint C are: $(\underline{\hspace{1cm}}, \underline{\hspace{1cm}})$

9. Given the hypothesis and conclusion statements below, identify the appropriate conditional statement.

- Hypothesis = I am a Florida State fan
- Conclusion = I am having a great September

- A. If I am having a great September, then I am a Florida State fan.
- B. If I am not having a great September, then I am not a Florida State fan.
- C. If I am not a Florida State fan, then I am not having a great September.
- D. If I am a Florida State fan, then I am having a great September.

10. Identify the converse of the following conditional statement:

“If you do not come to class on time, then you are considered tardy.”

- A. You are tardy if and only if you do not come to class on time.
- B. If you come to class on time, then you are not considered tardy.
- C. If you are not considered tardy, then you came to class on time.
- D. If you are considered tardy, then you did not come to class on time.

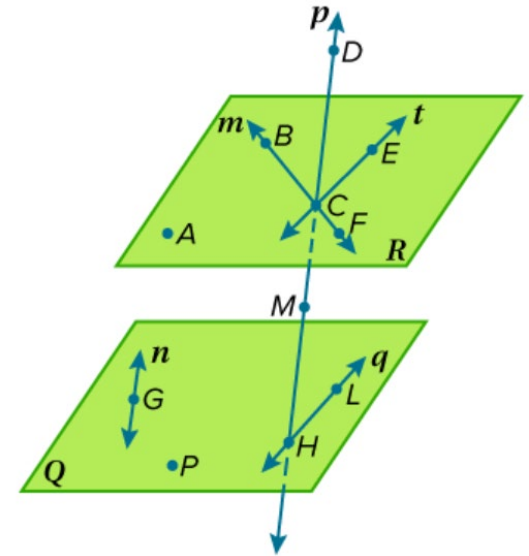
11. Consider the conditional statement: “If it rains, then it pours.”

Match the statements with their correct label.

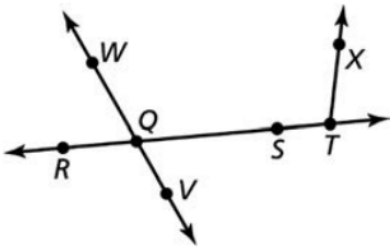
- Converse = _____
 - A. If it is not pouring, then it is not raining.
 - B. If it is pouring, then it is raining.
 - C. If it is not raining, then it is not pouring.
 - D. It is pouring if and only if it is raining.
- Inverse = _____
- Contrapositive = _____

12. Given the figure to the right, determine which of the following statements are true. Select all that apply.

- A. Lines t and n are coplanar.
- B. Points D , C , and M are collinear.
- C. Planes R and Q intersect at $\overline{DH}$.
- D. Lines q and n are coplanar.
- E. Lines t and m intersect at point C .



13. Given the figure below, consider the statement, " $RT = RQ + QT$."



Which of the following statements is a counterexample (Non-Example)?

- A. $RT = RS + ST$
- B. $RT = RQ + ST$
- C. $RT = RS + QT$
- D. $RT = RQ + QS$