These are the ones that need to be corrected first!

1-5	1-6	1-7	1-8	1-13	1-14	1-15

These are the ones you can try to correct, but we will definitely
Do these together! They were extra credit!

1-1	1-2	1-3	1-4	1-9	1-10	1-11	1-12	1-16	extra credit

1.) Select the correct response for the missing reason in the algebraic proof below.

Given: $3(2x+4)-5=2x+19$
Prove: $x=3$

Statements	Reasons
1. $3(2x+4)-5=2x+19$	1. Given
2. $6x+12-5=2x+19$	2. Distributive Property
3. $6x+7=2x+19$	3. [ ]
4. $4x+7=19$	4. Subtraction Property of Equality
5. $4x=12$	5. Subtraction Property of Equality
6. $x=3$	6. Division Property of Equality

Multiple Choice for Step 3

A Addition Property of Equality

B Subtraction Property of Equality

C Distributive Property

D Combine Like Terms / Simplify

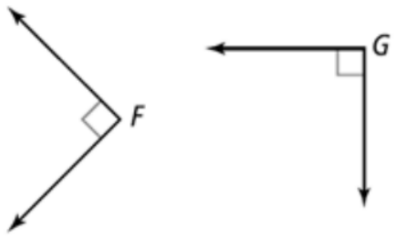
[redacted]

2.)

Select the correct response for the missing reason in the geometric proof below.

Given: $\angle F$ and $\angle G$ are right angles.

Prove: $\angle F \cong \angle G$



Statements	Reasons
1. $\angle F$ and $\angle G$ are right angles.	1. Given
2. $m\angle F = 90^\circ;\ m\angle G = 90^\circ$	2. Definition of Right Angles
3. $m\angle F = m\angle G$	3. Transitive Property of Equality
4. $\angle F \cong \angle G$	4.

Multiple Choice for Step 4

A. Definition of Congruent

B. Definition of Right Angles

C. Vertical angles are congruent.

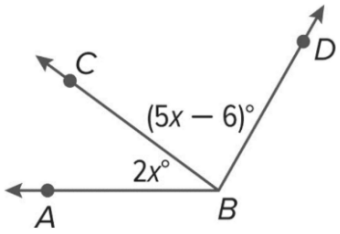
D. Definition of Complementary Angle

[redacted]

3.)

Select the correct response for the missing reason in the proof below.

- **Given**: $m\angle ABD = 120^\circ$
- **Prove**: $x = 18^\circ$



Statements	Reasons
1. $m\angle ABD = 120^\circ$	1. Given
2. $m\angle ABC + m\angle CBD = m\angle ABD$	2.
3. $2x + 5x - 6 = 120$	3. Substitution Property of Equality
4. $7x - 6 = 120$	4.
5. $7x = 126$	5. Addition Property of Equality
6. $x = 18^\circ$	6. Division Property of Equality

Multiple Choice Step 2

A Angle Addition Postulate

B Segment Addition Postulate

C Definition of Supplementary Angles

D Definition of Congruent

[redacted]

Multiple Choice Step 4

A Addition Property of Equality

B Subtraction Property of Equality

C Distributive Property

D Combine Like Terms / Simplify

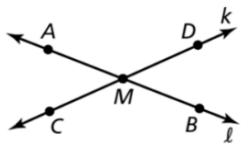
[redacted]

4.)

Given:

- $\overline{AB}$ and $\overline{CD}$ bisect each other at point M.
- $\overline{BM} \cong \overline{CM}$

Prove: $AB = AM + DM$



Statements	Reasons
1. $\overline{AB}$ and $\overline{CD}$ bisect each other at point M	1. Given
2. $AM = BM$; $CM = DM$	2.
3.	3. Given
4. $BM = CM$	4.
5. $BM = DM$	5.
6. $AB = AM + BM$	6.
7. $AB = AM + DM$	7.

Step 2

Definition of a Segment Bisector

Definition of Congruent

Segment Addition Postulate

Angle Addition Postulate

[redacted]

Step 3

$AB = AM + DM$

$\overline{BM} \cong \overline{CM}$

$\overline{AB} \cong \overline{CD}$

[redacted]

Step 4

Definition of Congruent

Definition of Midpoint

Transitive Property of Equality

Segment Addition Postulate

[redacted]

Step 5

Transitive Property of Equality

Definition of Congruent

Definition of Midpoint

Segement Addition Postulate

[redacted]

Step 6

Segment Addition Postulate

Angle Addition Postulate

Transitive Property of Equality

Addition Property of Equality

[redacted]

Step 7

Substititution Property of Equality

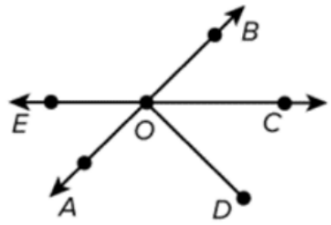
Addition Property of Equality

Subtraction Property of Equality

Reflexive Property of Equality

[redacted]

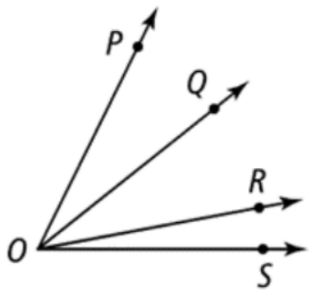
5.) If $\overleftrightarrow{EC}$ bisects $\angle BOD$, which of the following statements is true?



- $\overline{BO} \cong \overline{OD}$
- $\overline{EO} \cong \overline{OC}$
- $\angle BOD \cong \angle DOA$
- $\angle BOC \cong \angle COD$

[redacted]

6.) If $m\angle QOS = 46^\circ$, $m\angle POR = 61^\circ$, and $m\angle POQ = 28^\circ$, what is $m\angle ROS$?



- $m\angle ROS =$ [ ]$^\circ$

[redacted]

7.)

Points D, O, and K are collinear. Point K is between D and O.

Use the information below to find the length of $\overline{DK}$.

- $DK = 4x - 2$
- $OK = 5x - 19$
- $DO = 7x + 5$

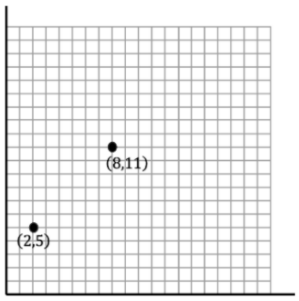
- ○ 13
- ○ 46
- ○ 50
- ○ 96



8.)

A gardener is laying out a straight flower bed on a flat garden plot. One corner of the bed is at point $A\,(2,5)$, and the bed's midpoint is at $M\,(8,11)$.

Find the coordinates of the other corner, the missing endpoint, of the flower bed.

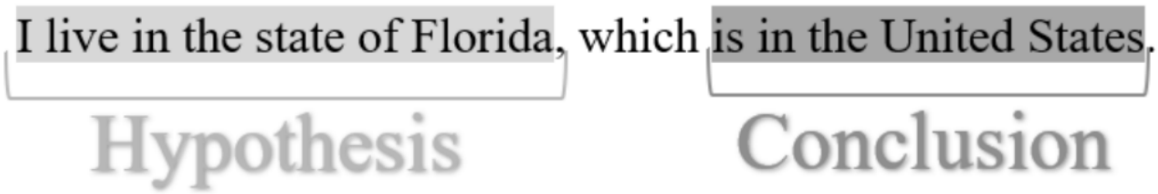


- The coordinates of the other corner, the missing endpoint, are: (,)

[redacted]

9.)

Tommy identified the hypothesis and conclusion of the statement below.



Identify the statement's appropriate conditional statement.

- ○ If I live in the state of Florida, then I live in the United States.
- ○ If I live in the United States, then I live in the state of Florida.
- ○ If I do not live in the state of Florida, then I do not live in the United States.
- ○ I I do not live in the United States, then I do not live in the state of Florida.

10.)

Consider the statement below:

- When I ride a bicycle, I wear a helmet.

Determine the hypothesis and the conclusion.

The hypothesis is [ ], and the conclusion is [ ].

[redacted]

11.)

Identify the inverse of the following conditional statement.

If it is not the weekend, then I have math class.

- ○ If I have math class, then it is not the weekend.
- ○ If it is not the weekend, then I do not have math class.
- ○ If it is the weekend, then I do not have math class.
- ○ If I do not have math class, then it is the weekend.



12.)

Consider the conditional statement below:

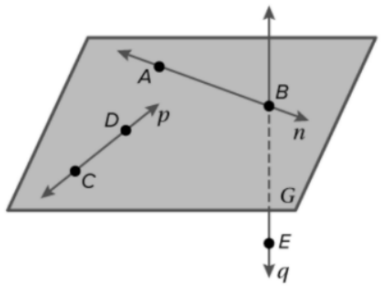
If you are an only child, then you do not have a sibling.

Identify the converse, inverse, and contrapositive of the conditional statment above.

	Statement
Converse	
Inverse	
Contrapositive	

	Statement
Converse	[redacted]
Inverse	[redacted]
Contrapositive	[redacted]

13.) Given the figure below, consider the statement "Line q is coplaner with line p."



Which of the following is correct?

- ○ The statement is true because both lines lie on plane G.
- ○ The statement is false because line q does not lie on plane G.
- ○ The statement is false because line p does not lie on plane G.
- ○ The statement is false because neither line lies on plane G.

[redacted]

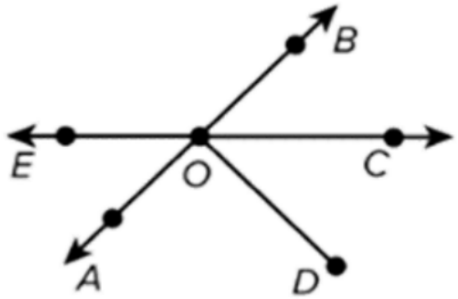
14.)

Which of the following statements are true? **Select all that apply.**

- [ ] Vertical angles are congruent.
- [ ] Supplementary angles sum to 180°.
- [ ] Complementary angles sum to 180°.
- [ ] A linear pair of angles always sums to 360°.
- [ ] Adjacent angles share a common vertex and one common side.
- [ ] An angle bisector divides an angle into two congruent angles.



15.) Given the diagram below, consider the statement, "all adjacent angles are supplementary."



Which pair of angles is a counterexample?

- ○ $\angle EOA$ & $\angle DOA$
- ○ $\angle EOA$ & $\angle COA$
- ○ $\angle BOD$ & $\angle DOA$
- ○ $\angle COD$ & $\angle DOE$

[redacted]

16.)

Determine which of the following are valid statements, then identify a counterexample if applicable.

Statement	Validity	Counterexample
If $\angle A$ and $\angle B$ form a linear pair, then one of the angles must be 90°.		
If $CD = CX + XD$, then $CX = DX$.		
If two points are collinear, then they must be coplaner.		

