Answers

x = 8

Symmetric POE

Distribution Property

Reflexive POC

x = 6

AB ≅ CD

62°

152°

Transitive POC

$m\angle 1 + m\angle 2 = 90°$

Definition of complementary angles

Substitution POE

$m\angle 2 = m\angle 3$

Definition of ≅ ∠'s

x = 9

114

linear pairs

vertical angles

27

Law of Detachment

Law of Syllogism

Contrapositive

~q ⇒ ~p

Inverse,

~p ⇒ ~q

Addition POE

Solve for the variable. PR = 33

Name the property

If x = 10, then 10 = x.

Name the property.

$$8(x - 3) = 8x - 24$$

Name the property

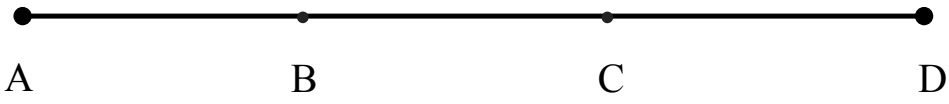
$$A \cong A$$

$\angle T$ and $\angle S$ form a linear pair. If $m\angle T = 17x + 12$ and $m\angle S = 7x + 24$. Find x.

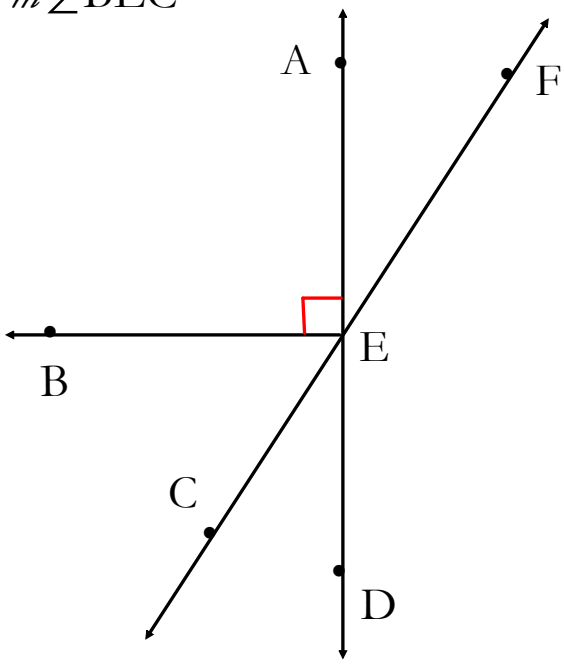
Using the **transitive property of congruence**, finish the statement

If $\overline{AB} \cong \overline{BC}$ and $\overline{BC} \cong \overline{CD}$

Then



Find $m\angle BEC$



Given:
$m\angle AEF = 28°$

Find $m\angle FED$

Name the property.

If $\angle 3 \cong \angle 4$ and $\angle 4 \cong \angle 1$, then $\angle 3 \cong \angle 1$

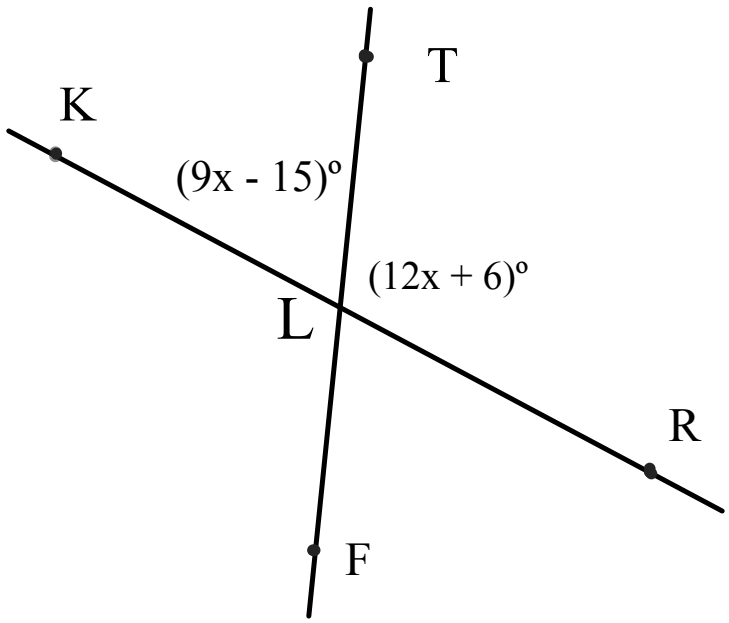
Given: $\angle 1$ and $\angle 2$ are complements

$\angle 1$ and $\angle 3$ are complements

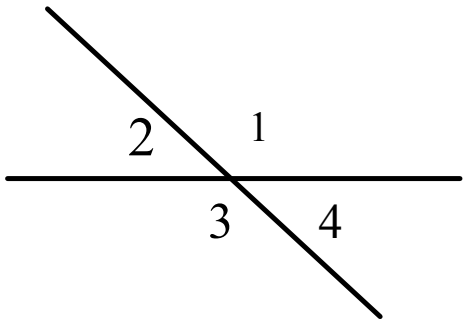
Prove: $\angle 2 \cong \angle 3$

Statements	Reasons
1. $\angle 1$ and $\angle 2$ are complements	1. Given
2. $\angle 1$ and $\angle 3$ are complements	2. Given
3. _____	3. Definition of complementary angles
4. $m\angle 1 + m\angle 3 = 90^\circ$	4. _____
5. $m\angle 1 + m\angle 2 = m\angle 1 + m\angle 3$	5. _____
6. _____	6. Subtraction POE
7. $\angle 2 \cong \angle 3$	7. _____

Solve for x



Find $m\angle KLF$



What kind of angles are $\angle 3$ and $\angle 4$?

What kind of angles are $\angle 2$ and $\angle 4$?

Find the next number in the sequence:
2, 5, 9, 14, 20,....

State whether it is Law of Detachment or Law of Syllogism.

If $m\angle B > 90^\circ$, then $\angle A$ is acute.

$m\angle B = 144$, so $\angle A$ is acute.

State whether it is the Law of Detachment or the Law of Syllogism

If Mark cuts Phil's grass for the summer, then Mark will make $500.
If Mark makes $500, then he will buy a Playstation 3.

If Mark cuts Phil's grass for the summer, then he will buy a Playstation 3.

Let p be "the sky is blue" and let q be "it is a clear day."

State which kind of conditional statement follows.

If it is not a clear day, then the sky is not blue.

If the sky is not blue, then it is not a clear day.

State the property:

If $a = b$, then $a + 11 = b + 11$