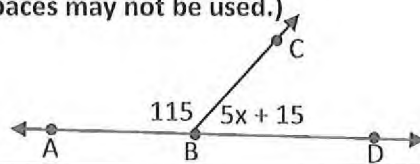


Intro to Proofs and Parallel Lines cut by a Transversal Quiz

Name: _____
 Period: _____

1. Prove the following using a two-column proof. (All of the spaces may not be used.)

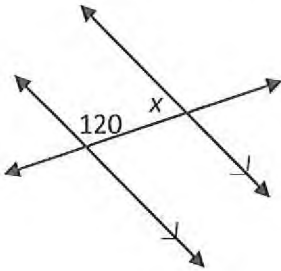
Given: $\angle ABC$ and $\angle CBD$ are a linear pair.
Prove: $x = 10$



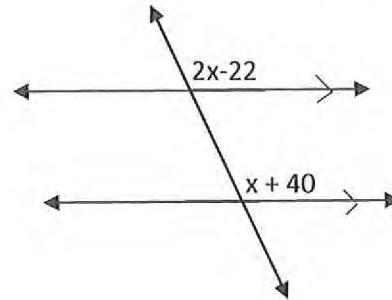
| STATEMENTS | REASONS |
|------------|---------|
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For # 2-3, find the value of x . (Show your work!) State the theorem/postulate used to find the value of x .

2.

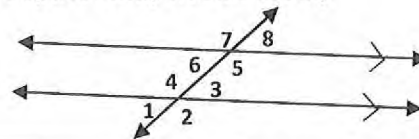


3.



4. Prove the following using a two-column proof. (All of the spaces may not be used.)

Given: $p \parallel q$
Prove: $m\angle 7 = m\angle 2$

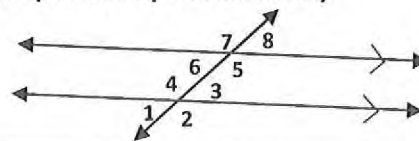


| STATEMENTS | REASONS |
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5. Prove the following using a two-column proof. (All of the spaces may not be used.)

Given: $p \parallel q$
Prove: $m\angle 1 = m\angle 6$

You cannot use the Corresponding Angles Theorem in this proof!



| STATEMENTS | REASONS |
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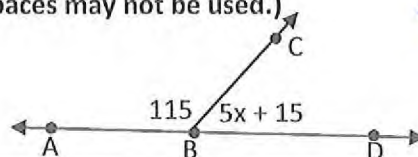
Intro to Proofs and Parallel Lines cut by a Transversal Quiz

Name: Key
 Period: _____

2 pt

1. Prove the following using a two-column proof. (All of the spaces may not be used.)

Given: $\angle ABC$ and $\angle CBD$ are a linear pair.
 Prove: $x = 10$



$33 = 100 = 50$

| STATEMENTS | REASONS |
|---|-------------------------------|
| $\angle ABC + \angle CBD$ are a linear pair | Given |
| $m\angle ABC + m\angle CBD = 180$ | Linear Pair Theorem |
| $115 + 5x + 15 = 180$ | Substitution Prop of Equality |
| $5x + 130 = 180$ | Simplify |
| $5x = 50$ | Subtraction Prop of Equality |
| $x = 10$ | Division Prop of Equality |

2 pt

For # 2-3, find the value of x. (Show your work!) State the theorem/postulate used to find the value of x.

2. $120 + x = 180$
 $x = 60$
 Same-Side Interior Angles Postulate

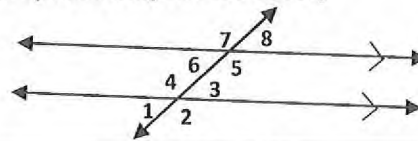
3 pt

3. $2x - 22 = x + 40$
 $x - 22 = 40$
 $x = 62$
 Corresponding Angles Theorem

8 pt

4. Prove the following using a two-column proof. (All of the spaces may not be used.)

Given: $p \parallel q$
 Prove: $m\angle 7 = m\angle 2$



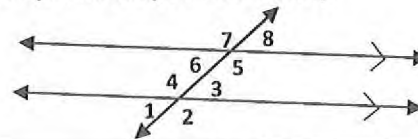
| STATEMENTS | REASONS |
|-------------------------|------------------------------|
| $p \parallel q$ | Given |
| $m\angle 7 = m\angle 5$ | Vertical Angles Theorem |
| $m\angle 5 = m\angle 2$ | Corresponding Angles Theorem |
| $m\angle 7 = m\angle 2$ | Transitive Prop of Equality |

8 pt

5. Prove the following using a two-column proof. (All of the spaces may not be used.)

Given: $p \parallel q$
 Prove: $m\angle 1 = m\angle 6$

You cannot use the Corresponding Angles Theorem in this proof!



| STATEMENTS | REASONS |
|-------------------------|-----------------------------------|
| $p \parallel q$ | Given |
| $m\angle 1 = m\angle 3$ | Vertical Angles Theorem |
| $m\angle 3 = m\angle 6$ | Alternate Interior Angles Theorem |
| $m\angle 1 = m\angle 6$ | Transitive Prop of Equality |