5-1 Opener - Angles of Triangles

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_ Period:\_\_\_\_\_\_\_\_

Find the measure of each numbered angle.



Find*m*∠*ACB.*



1. Find each measure in triangle $GHJ$.

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5-1 Exit Slip - Angles of Triangles

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_ Period:\_\_\_\_\_\_\_\_

1. Find the measure of each numbered angle.

 Find *m*∠*FGH*



1. Find each measure in rectangle ABCD

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5-2 Opener – Congruent Triangles

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_ Period:\_\_\_\_\_\_\_\_

Show that the polygons are congruent by identifying all congruent corresponding parts. Then, write the congruence statement.



In the diagram, polygon $JKLM≅$ polygon $WXYZ$.

Find the value of $x$

Find $m∠L$.

Find the value of $y$.

5-2 Exit Slip – Congruent Triangles

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_ Period:\_\_\_\_\_\_\_\_

Show that the polygons are congruent by identifying all congruent corresponding parts. Then, write the congruence statement.



In the diagram, $∆JKL ≅$ $∆QRS$.

Find the value of $x$.

Find $m∠R$.

Find the value of $y$.

5-3 Opener – Proving Triangles Congruent: SSS and SAS

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_ Period:\_\_\_\_\_\_\_\_

Write the specified proof using a two-column proof.

1. 

**Given:** $\overbar{AB}≅\overbar{DC}$, $AB∥DC$

**Prove:** ∆ABC≅∆DCB



**Given:** JK≅BC, KL≅CD, LJ≅DB

**Prove:** ∆JKL≅∆BCD

5-3 Exit Slip – Proving Triangles Congruent: SSS and SAS

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_ Period:\_\_\_\_\_\_\_\_

Write the specified proof using a two-column proof.

1. 

**Given:** JK≅KL**,** *M* is the midpoint ofJL.

**Prove:** ∆JKM≅LKM

1. 

**Given:** QR≅RS and ∠QRT≅∠SRT

**Prove:** ∆QRT≅∆SRT

5-4 Opener – Proving Triangles Congruent: ASA and AAS

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_ Period:\_\_\_\_\_\_\_\_

Write the specified proof using a two-column proof.

1. 

**Given:** $∠PQT≅∠RQS$, $PQ≅RQ$,

$∠QPT$ and $∠QRS$ are right angles.

**Prove:** $∆PQT≅∆RQS$

**Given:** $YW $bisects  $UX$, $UV∥YW$,

<X≅∠VYU

**Prove:** ∆UVY≅∆YWX

5-4 Exit Slip – Proving Triangles Congruent: ASA and AAS

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_ Period:\_\_\_\_\_\_\_\_

Write the specified proof using a two-column proof.

1.

**Given:** $∠D≅∠G$, $F$is the midpoint of $DG$.

**Prove:** $∆DEF≅∆GHF$

**Given:** $KL∥MJ, ∠KJL≅∠MLJ$

**Prove:** $∆JKL≅∆LMJ$

5-5 Opener – Proving Right Triangles Congruent

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_ Period:\_\_\_\_\_\_\_\_

**INTERIOR ROOF STRUCTURE** Typical interior roof structures use beams and braces that form specific geometric patterns. Write a two-column proof to show that the triangles formed by the diagonal support posts are congruent.

**Given:** *B* is the midpoint of AE; CB≅DB;

∠CAB and ∠DEB are right angles.

**Prove:** ∆CAB≅∆DEB 

**TOAST**  Two pieces of toast will make a perfect match if the triangles shown are congruent. Write a two-column proof to show that the illustrated triangles are congruent.

**Given:** PR≅TV:PQ≅TU:∠Q and ∠U are right angles.

**Prove:** ∆PQR≅∆TUV

5-5 Exit Slip – Proving Right Triangles Congruent

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_ Period:\_\_\_\_\_\_\_\_

**SAILBOAT**  Sailboats have triangular-shaped sails to catch the wind and push the boats. Write a two-column proof to show that the illustrated triangles are congruent.

**Given:**  ∠S and ∠Z are right angles, ∠RQS≅∠YXZ: QR≅XY

**Prove:** ∆RQS≅∆YXZ

**CLASSIC ARCHITECTURE**  Engineers began using sloped roofs in classic architecture thousands of years ago. Write a two-column proof to show that the illustrated triangles are congruent.

**Given:** WYX and WYZ are right angles, XY≅ZY

**Prove:** ∆WYX≅∆WYZ

* 1. Opener – Isosceles and Equilateral Triangles

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_ Period:\_\_\_\_\_\_\_\_

Find the value of $x$.

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**BILLIARDS** A billiards ball rack can be modeled by ∆*ABC*. Solve for x and y.



 5-6 Exit Slip – Isosceles and Equilateral Triangles

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_ Period:\_\_\_\_\_\_\_\_

1. Find the value of x.

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**PYRAMIDS** A pyramid is made up of four triangular sides. Solve for x and y.

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