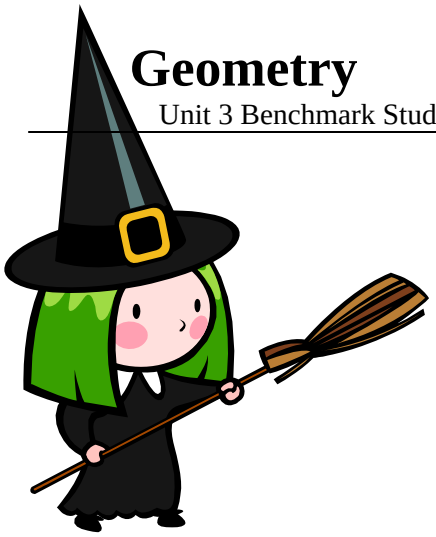
Geometry

Unit 3 Benchmark Study Guide

Name:

Date: Period: 1 2 3 4 5 6

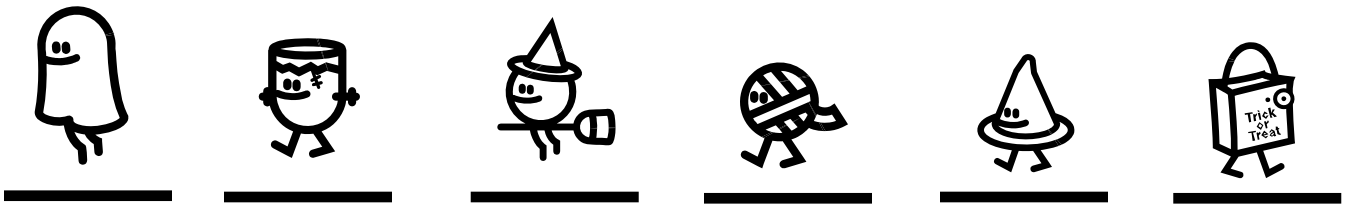


- ☐ 1. Study ALL the proofs that we have done in class [6 different ones]
  Ex. Pick the correct proof, insert one line, insert two lines
- ☐ 2. Know all the relationships involving a transversal.
  ex. Corresponding , Alternate interior, alternate exterior, consecutive interior, vertical, linear pair
- ☐ 3. Know the definition of deductive reasoning and inductive reasoning
- ☐ 4. Know all the properties [reflexive, symmetric, transitive, substitution, etc]
- ☐ 5. Know the distance formula, midpoint formula, slope formula
- ☐ 6. Know how to find the equation of a circle
- ☐ 7. Identify the different constructions
- ☐ 8. Know the steps of angle bisector
- ☐ 9. Know how to find reflections, rotations, and translations
- ☐ 10. Know properties of perpendicular bisector, angle bisector, midpoint

Things that I need to study:

Proofs:

Not Proofs:



Problems

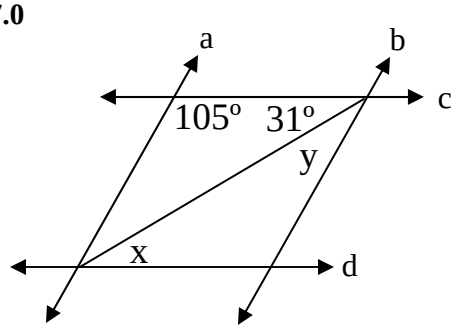
Geometry

Unit 3 Benchmark Review Extravaganza A

Name:
Date: Period: 1 2 3 4 5 6

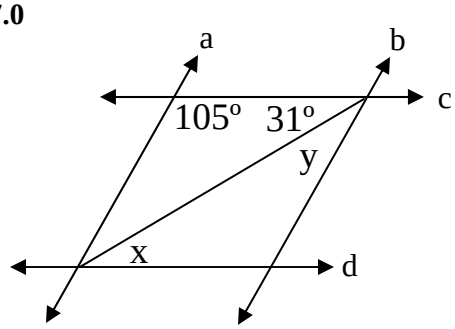
1 Given: a || b and c || d
Find the value of the following variables.

G 7.0



2 Given: a || b and c || d
Find the value of the following variables.

G 7.0



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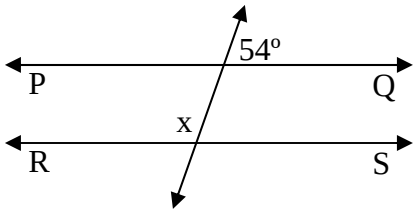
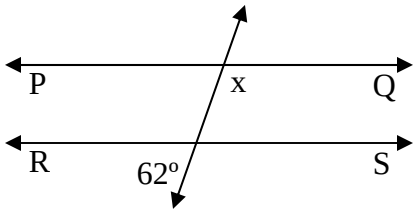
3 Find m $\angle$ x in the figure below. $\overleftrightarrow{PQ}$ and $\overleftrightarrow{RS}$ are parallel.

G 7.0



4 Find m $\angle$ x in the figure below. $\overleftrightarrow{PQ}$ and $\overleftrightarrow{RS}$ are parallel.

G 7.0



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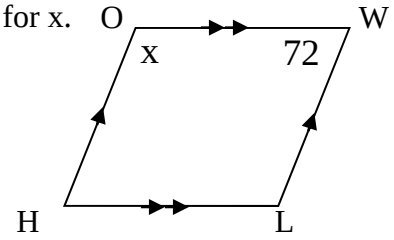
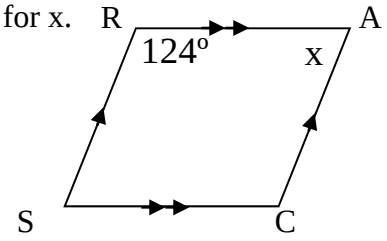
5 Find the value for x.

G 1.0



6 Find the value for x.

G 1.0



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7 State the appropriate property for each example

G 1.0

A If y = x + 8, then x + 8 = y.

B x – 5 = x - 5

C If x – 8 = y and x = 2, then 2 – 8 =y

8 State the appropriate property for each example

G 1.0

A x + 5 = x + 5

B If x – 7 = y and x = 9, then 9 – 7 =y

C If y = x + 12, then x + 12 = y.

Geometry

Unit 3 Benchmark Review Extravaganza B

Name:
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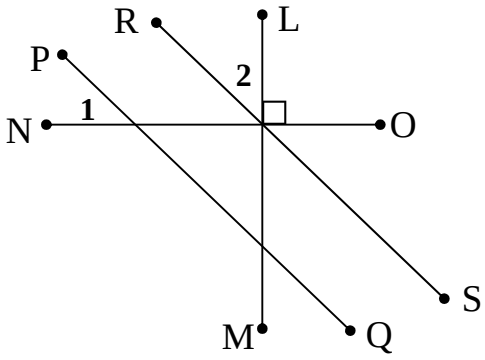
1 **G 7.0**

Given: $\overleftrightarrow{PQ} \parallel \overleftrightarrow{RS}$
$\overleftrightarrow{LM} \perp \overleftrightarrow{NO}$
$m\angle 1 = 52°$

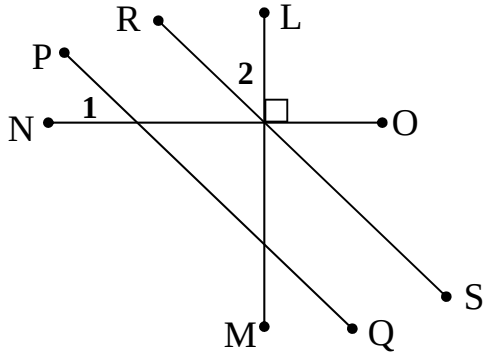
Find: m∠2



2 **G 7.0**

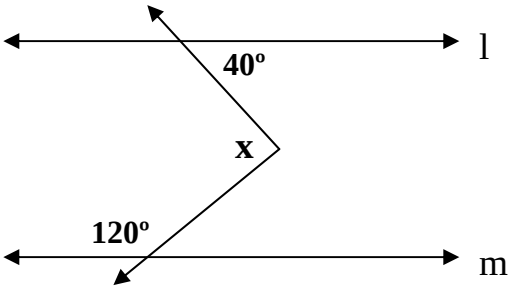
Given: $\overleftrightarrow{PQ} \parallel \overleftrightarrow{RS}$
$\overleftrightarrow{LM} \perp \overleftrightarrow{NO}$
$m\angle 2 = 46°$

Find: m∠1



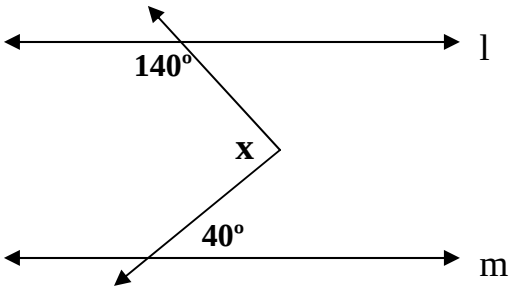
3 **G 7.0**

Given that l || m, what is the value of x?



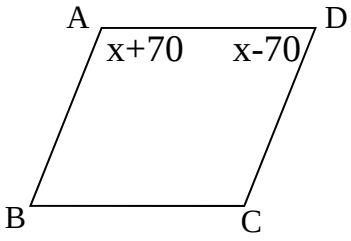
4 **G 7.0**

Given that l || m, what is the value of x?



5 **G 7.0**

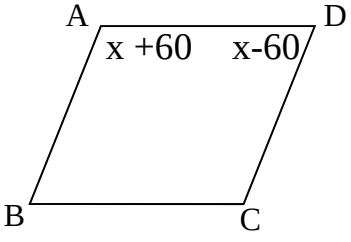
In the figure below, $\overleftrightarrow{AB} \parallel \overleftrightarrow{CD}$



Find the measure of angle A

6 **G 7.0**

In the figure below, $\overleftrightarrow{AB} \parallel \overleftrightarrow{CD}$



Find the measure of angle A

Geometry

Unit 3 Benchmark Review Extravaganza C

Name:
Date: Period: 1 2 3 4 5 6

1 What is the distance between the points: (-4, 6) and (-2, 4)

G 17.0

2 What is the distance between the points: (5, -10) and (2, 20)

G 17.0

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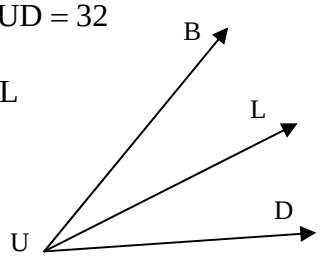
3 Given: m ∠ BUL = 2x + 5
m ∠ LUD = 2x + 3
m ∠BUD = 32

Find: m ∠ BUL

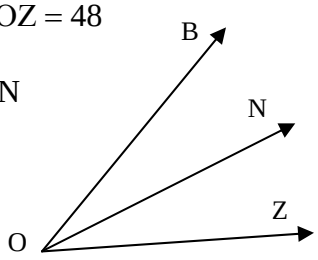
G 1.0



4 Given: m ∠ BON = 4x + 3
m ∠ NOZ = 2x + 13
m ∠BOZ = 48

Find: m ∠ BON

G 1.0



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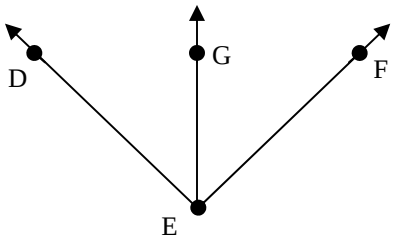
5 Solve for x: In the figure (not drawn to scale), $\overrightarrow{EG}$ bisects $\angle DEF$

m ∠ DEF = 64
m ∠ DEG = 4x + 4

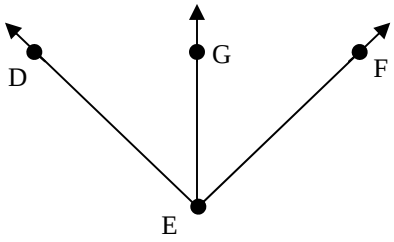
G 1.0



6 Solve for x: In the figure (not drawn to scale), $\overrightarrow{EG}$ bisects $\angle DEF$

m ∠ DEF = 82
m ∠ DEG = 2x + 7

G 1.0



Geometry

Unit 3 Benchmark Review Extravaganza D

Name:

Date: Period: 1 2 3 4 5 6

1 Given the point (8, -7). Which of the following are the coordinates of a reflection across y = x.

G 22.0

2 Given the point (-5, -7). Which of the following are the coordinates of a reflection across y = x.

G 22.0

3 Given the point (8, -7). Which of the following are the coordinates of a reflection across y = -x.

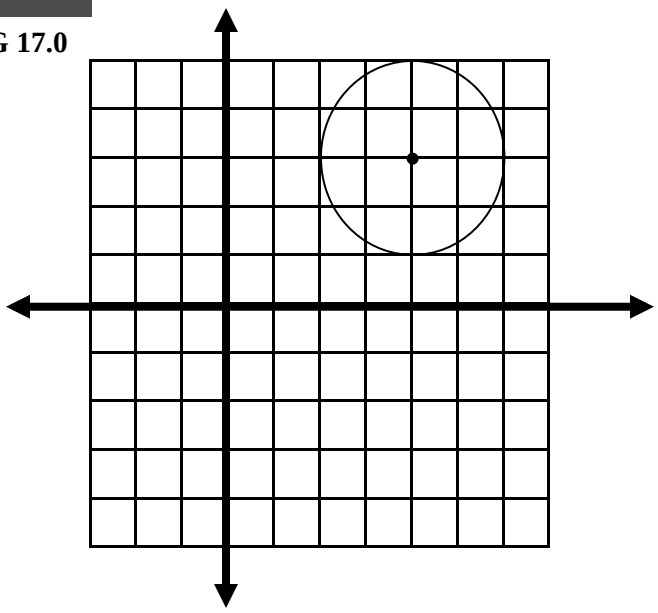
G 22.0

4 Given the point (-5, -7). Which of the following are the coordinates of a reflection across y = -x.

G 22.0

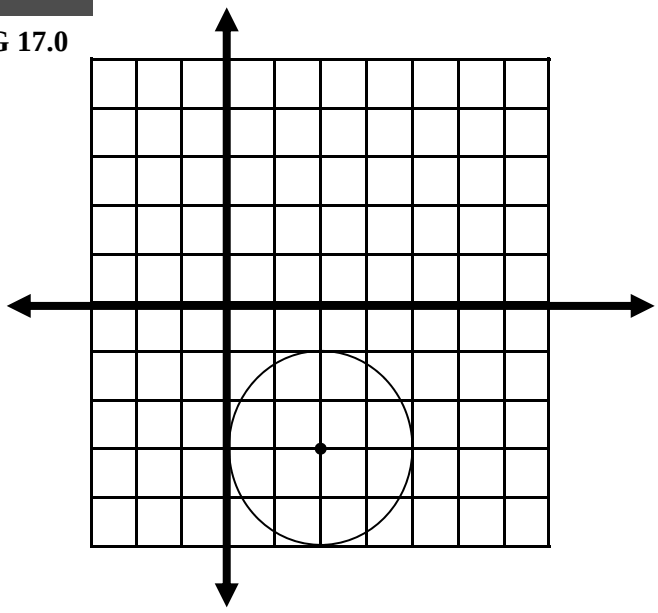
5 What is the equation of the circle?

G 17.0



6 What is the equation of the circle?

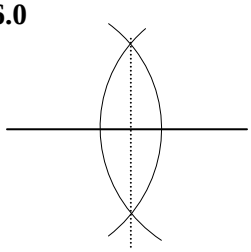
G 17.0



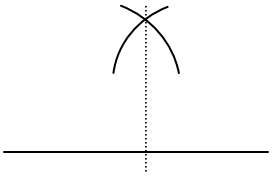
7 Identify the following constructions

G 16.0

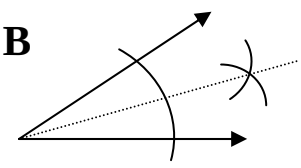
A



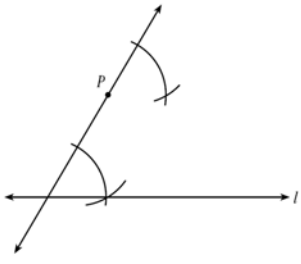
C



B



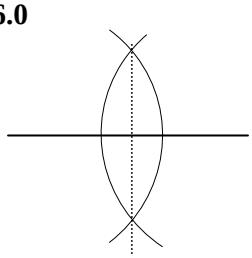
D



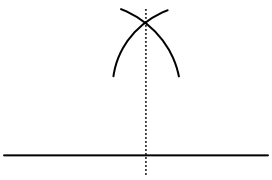
8 Identify the following constructions

G 16.0

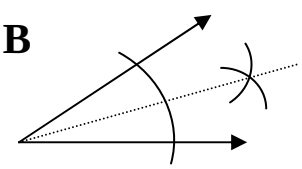
A



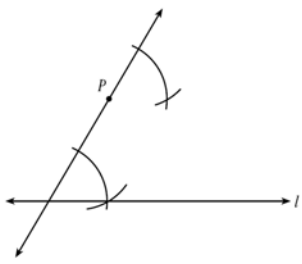
C



B



D



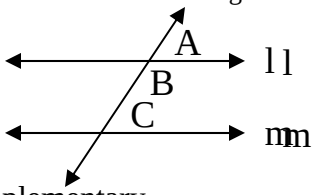
Geometry

Unit 3 Benchmark Review Extravaganza E

Name:
Date: Period: 1 2 3 4 5 6

1 Correct the proof of the Consecutive Interior Angles theorem?

G 7.0



Given: l || m

Prove: $\angle$ B and $\angle$ C are supplementary

A

Statements	Reasons
l || m	Given
$\angle A \cong \angle C$	Correspond. $\angle$'s Post.
$\angle A, \angle B$ are vertical angles	Def of vertical angles
$\angle A, \angle B$ are supplementary	Vertical Angles Post.
$m\angle A + m\angle B = 180°$	Def. of Supplementary
$m \angle A = m \angle C$	Def of congruent angles
$m\angle C + m\angle B = 180°$	Substitution Prop.
$\angle A, \angle B$ are supplementary	Def. of Supplementary

■

B

Statements	Reasons
l || m	Given
$\angle A \cong \angle C$	Correspond. $\angle$'s Post.
$\angle A, \angle B$ are a linear pair	Def of linear pair
$\angle A, \angle B$ are supplementary	Linear Pair Post.
$m\angle A + m\angle B = 180°$	Def. of Supplementary
$m \angle A = m \angle C$	Def of congruent angles
$m\angle C + m\angle B = 180°$	Substitution Prop.
$\angle B, \angle C$ are supplementary	Def. of Supplementary

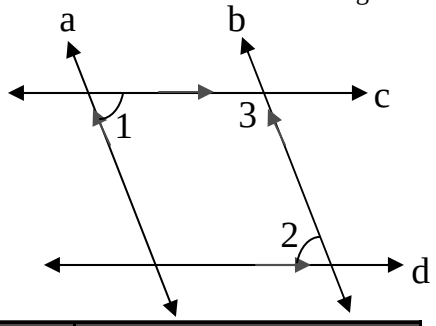
C

Statements	Reasons
l || m	Given
$\angle A \cong \angle C$	Correspond. $\angle$'s Post.
$\angle A, \angle C$ are a linear pair	Consec. Interior Angles
$\angle A, \angle C$ are supplementary	Linear Pair Post.
$m\angle A + m\angle C = 180°$	Def. of Supplementary
$m \angle A = m \angle C$	Def of congruent angles
$m\angle C + m\angle B = 180°$	Substitution Prop.
$\angle A, \angle B$ are supplementary	Def. of Supplementary

■

2 Correct the proof of the Consecutive Interior Angles theorem?

G 2.0



Given: a || b

$\angle 1 \cong \angle 2$

Prove: c || d

A

Statements	Reasons
a || b	Given
$\angle 1, \angle 3$ are supplementary	Consecutive Int. $\angle$'s Thm
$m \angle 1 + m \angle 3 = 180°$	Def of supplementary $\angle$'s
$\angle 1 \cong \angle 2$	Given
$m\angle 1 = m\angle 2$	Def of congruent segments
$m\angle 2 + m\angle 3 = 180°$	Transitive Prop.
$\angle 2, \angle 3$ are supplementary	Def of supplementary $\angle$'s
c || d	Consecutive Int. $\angle$'s Thm

■

B

Statements	Reasons
a || b	Given
$\angle 1, \angle 3$ are supplementary	Consecutive Int. $\angle$'s Thm
$m \angle 1 + m \angle 3 = 180°$	Def of supplementary $\angle$'s
$\angle 1 \cong \angle 2$	Given
$m\angle 1 = m\angle 2$	Def of congruent $\angle$'s
$m\angle 2 + m\angle 3 = 180°$	Substitution Prop.
$\angle 2, \angle 3$ are supplementary	Def of supplementary $\angle$'s
c || d	Consecutive Int. $\angle$'s Thm

■

C

Statements	Reasons
a || b	Given
$\angle 1, \angle 3$ are complementary	Consecutive Int. $\angle$'s Thm
$m \angle 1 + m \angle 3 = 180°$	Def of supplementary $\angle$'s
$\angle 1 \cong \angle 2$	Given
$m\angle 1 = m\angle 2$	Def of congruent $\angle$'s
$m\angle 2 + m\angle 3 = 180°$	Substitution Prop.
$\angle 2, \angle 3$ are supplementary	Def of supplementary $\angle$'s
c || d	Corresponding. $\angle$'sThm

■

Geometry

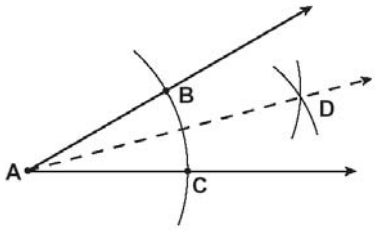
Unit 3 Benchmark Review Extravaganza F

Name:

Date: Period: 1 2 3 4 5 6

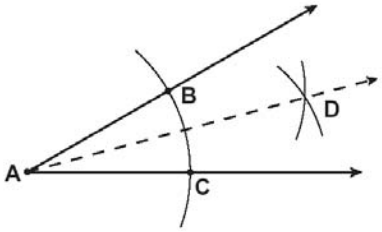
1 What are the steps of the following construction?

G 16.0



2 What are the steps of the following construction?

G 16.0



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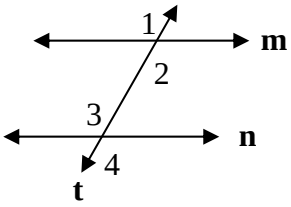
3 In the diagram below, $\angle 1 \cong \angle 4$

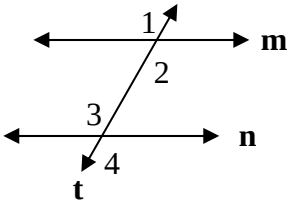
G 7.0



List four things that *must* be true:

4 In the diagram below, $\angle 2 \cong \angle 3$

G 7.0



List four things that *must* be true:

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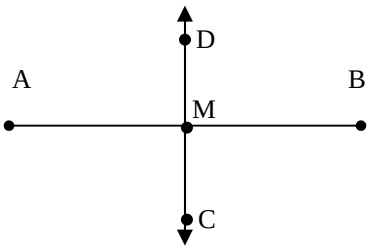
5 Line DC is the perpendicular bisector of $\overleftrightarrow{AB}$ List three statements that are true?

G 1.0



6 Line DC is the perpendicular bisector of $\overleftrightarrow{AB}$ List three statements that are true?

G 1.0