

January 14, 2019, Monday  
Highly missed on the unit 1 test

1 Which post-image at right is not a rotation of  $\triangle FGH$  shown below?

2 Given the translation  $(x,y) \rightarrow (x,y-2)$ , what is the pre-image of  $Q(3,5)$ ?

A.  $Q(5,7)$  B.  $Q(3,7)$  C.  $Q(3,3)$  D.  $Q(5,3)$

3 List a sequence of transformations that will map  $\triangle ABC$  clockwise to  $\triangle A''B''C''$ . (Hint: x-axis symmetry, y-axis symmetry,  $90^\circ$ ,  $180^\circ$ ,  $270^\circ$  CCW rotation, or translation)

Reflection  
Rotation  
Translation

Jan 10-11:52 AM

Define the following angle types & include a picture:

- acute
- obtuse
- right
- straight
- complementary
- supplementary
- vertical
- adjacent
- linear pair

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Unit 2 - Similarity, Congruence, & Proofs

- Geometry, angle addition postulate
- Geometry, vertical angle, anders84
- Geometry, complementary angles, Brennezaki
- Geometry, supplementary angles, raskins

Write what you discover from each file? (Please write this down 1-2 sentences)

Jan 10-2:42 PM

Geometry Unit 2 Classify, Name, < Addition, Comp & Supplementary <s, Linear Pairs

Classify each angle as acute, obtuse, right, or straight.

1) obtuse 2) right  
3) obtuse 4) straight  
5) acute 6) acute

7) Name each angle in four ways.  
NOTICE THE VERTICES ALWAYS BE THE MIDDLE LETTER.  
 $\angle CDE$   
 $\angle EDC$   
 $\angle D$   
 $\angle C$

8)  $\angle FGH$   
 $\angle GFH$   
 $\angle H$   
 $\angle G$

9)  $\angle JKL$   
 $\angle LJK$   
 $\angle KJL$   
 $\angle L$   
 $\angle J$   
 $\angle K$

Use the angle addition postulate to find the missing measurements.

11)  $m\angle HJ = 152^\circ$  and  $m\angle IJ = 60^\circ$ . Find  $m\angle FJ$ .  
 $\angle HJF + \angle FIJ = \angle HIJ$   
 $60 + \angle FIJ = 152$   
 $-60$   
 $\angle FIJ = 92^\circ$

12)  $m\angle QRS = 135^\circ$  and  $m\angle QRH = 74^\circ$ . Find  $m\angle HRS$ .

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angle addition postulate

$\angle ABK + \angle KBC = \angle ABC$

12)  $m\angle QRS = 135^\circ$  and  $m\angle QRH = 74^\circ$ . Find  $m\angle HRS$ .

$\angle SRH + \angle HRQ = \angle SRQ$   
 $\angle HRS + 74 = 135$   
 $-74$   
 $\angle HRS = 61$

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13) Find  $m\angle CDK$  if  $m\angle KDE = 160^\circ$  and  $m\angle CDE = 180^\circ$ .

$\angle CDK + \angle KDE = \angle CDE$   
 $\angle CDK + 160 = 180$   
 $-160$   
 $\angle CDK = 20$

14)  $m\angle JKL = 107^\circ$  and  $m\angle MKL = 85^\circ$ . Find  $m\angle JKM$ .

$\angle JKM + \angle MKL = \angle JKL$   
 $\angle JKM + 85 = 107$   
 $-85$   
 $\angle JKM = 22$

15)  $m\angle PGZ = 52^\circ$  and  $m\angle ZGH = 94^\circ$ . Find  $m\angle PZH$ .

$\angle PGZ + \angle ZGH = \angle PZH$   
 $52 + 94 = \angle PZH$   
 $146 = \angle PZH$

16) Find  $m\angle HJ$  if  $m\angle IJG = 70^\circ$  and  $m\angle GHJ = 52^\circ$ .

17) Adjacent  
18) linear pair (supplementary) (adjacent)  
19) adjacent (or) complementary  
20) vertical  
21) Adj.  
22) Adjacent (or) complementary

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Using vertical angles find the measure of angle h.

23)  $h = 73^\circ$

24)  $h = 52^\circ$

25)  $h = 59^\circ$

26)  $h = 85^\circ$

27)  $h = 64^\circ$

28)  $h = 90^\circ$

Using complementary angles find the value of x.

29)  $2x + 25 = 90$   
 $2x = 65$   
 $x = 32.5$

30)  $66 + x + 9 = 90$   
 $75 + x = 90$   
 $x = 15$

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31)  $x - 31 = h$

Supplementary = 180

32)  $b + 23 = 180 - 123$   
 $b = 57$

33)  $61 + B = 180$   
 $B = 119$

34)  $48 + h = 180$   
 $h = 132$

Find the value of x.

35)  $4x + 3 + 77 = 180$   
 $4x + 80 = 180$   
 $4x = 100$   
 $x = 25$

36)  $2x + 9 + 3x + 1 = 180$   
 $5x + 10 = 180$   
 $5x = 170$   
 $x = 34$

37)  $7x + 19 = 180 - 19$   
 $7x = 161$   
 $x = 23$

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Complementary Angles: Find the measure of angle h.

38)  $h = 43^\circ$

39)  $h = 54^\circ$

40)  $h = 43^\circ$

41)  $h = 43^\circ$

Supplementary Angles: Find the measure of angle h.

42)  $h = 80^\circ$

43)  $h = 80^\circ$

44)  $h = 80^\circ$

45)  $h = 80^\circ$

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January 15, 2019, Tuesday

Sketch a complementary, supplementary, vertical, linear pairs angle.

Complementary = 2 angles which = 90°

Supplementary = 2 angles which = 180°

Vertical = Vertical Angles are equal.

Linear Pairs angle

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Geometry Name \_\_\_\_\_ ID: 1

Angles: Complementary, Supplementary, & Vertical Date \_\_\_\_\_ Period \_\_\_\_\_

Name the relationship: complementary, linear pair, vertical, or adjacent.

1)  $90^\circ$

2)  $180^\circ$

3)  $70^\circ$

4)  $110^\circ$

5)  $90^\circ$

6)  $180^\circ$

7)  $70^\circ$

8)  $110^\circ$

Find the measure of angle h.

9)  $h = 65^\circ$

10)  $h = 65^\circ$

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11)  $h = 44^\circ$

12)  $h = 53^\circ$

Find the value of x.

13)  $4x + 11 = 180 - 117$   
 $4x = 61$   
 $x = 15.25$

14)  $4x + 17 = 180 - 47$   
 $4x = 116$   
 $x = 29$

Find the measure of angle h.

15)  $h = 63^\circ$

16)  $h = 63^\circ$

17)  $h = 65^\circ$

18)  $h = 65^\circ$

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Find the value of  $x$ .

19)

20)

Find the measure of angle  $b$ .

21)

22)

23)

24)

Find the value of  $x$ .

25)

26)

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Geometry Group Work Name \_\_\_\_\_ ID: 1  
 Angles: Complementary, Supplementary, & Vertical Date \_\_\_\_\_ Period \_\_\_\_\_  
 Name the relationship: complementary, linear pair, vertical, or adjacent.

1)

2)

Find the measure of angle  $b$ .

3)

4)

5)

6)

7)

8)

9)

10)

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Find the value of  $x$ .

11)

12)

13)

14)

15)

16)

17)

18)

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January 16, 2019, Wednesday

Name the relationship: complementary, linear pair, vertical, or adjacent.

1)   
 Linear pair

2)   
 Complementary

Find the measure of angle  $b$ .

3)   
 $180 = 102 + b$   
 $-102 -102$   
 $78 = b$

Find the value of  $x$ .

4)   
 $6x + 3 = 75$   
 $-3 -3$   
 $6x = 72$   
 $x = 12$

Do we need to go over any from the "group" work from yesterday??

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Geogebra, Exploring parallel lines cut by a transversal

What do you notice about the following angles when a transversal passes through parallel lines?

Corresponding  
 Vertically Opposite  
 Alternate Interior  
 Alternate Exterior  
 Interior Same Side  
 Exterior Same Side

*"parallel"*  
*trans*  
*versal*

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Unit 2 - Similarity, Congruence, and Proofs Name \_\_\_\_\_  
 Labeling parallel lines and the transversal angle relationships

Write the angle relationship for each pair of angles.

Vertical Angles: equal  
 Alternate Interior Angles: equal  
 Alternate Exterior Angles: equal  
 Corresponding Angles: equal  
 Complementary Angles = 90  
 Supplementary Angles = 180  
 Vertical Angles: equal

1 and 2 are Corresponding  
 1 and 3 are Supplementary  
 1 and 4 are Alternate Exterior  
 2 and 5 are Vertical  
 2 and 6 are Alternate Interior  
 3 and 2 are Same Side Interior  
 3 and 7 are Alternate Interior  
 3 and 8 are Supplementary  
 4 and 7 are Corresponding  
 4 and 6 are Alternate Exterior  
 4 and 5 are Same Side Exterior  
 5 and 4 are Supplementary

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Geometry \_\_\_\_\_ Name \_\_\_\_\_ ID: 1  
 Angle Relationships in Parallel Lines \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_\_  
 Name the relationship: alternate interior, corresponding, or alternate exterior.

1) alternate interior  
 2) alt. int.

3) corr.  
 4) alt. ext.

5) alt. ext.  
 6) corr.

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Find the measure of angle b.

7) corresponding  
 $b = 65^\circ$

8) alt. int.  
 $b = 128$

9) corr.  
 $b = 124^\circ$

10) alt. int.  
 $b = 113^\circ$

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11) corresponding  
 $b = 85^\circ$

12) alt. ext.  
 $b = 101^\circ$

Find the value of x.

13) alt. ext.  
 $4x + \frac{7}{2} = 74$   
 $\frac{4x}{2} + \frac{7}{2} = \frac{148}{2}$   
 $4x + 7 = 148$   
 $4x = 141$   
 $x = 35.25$

14) alt. ext.  
 $4x + \frac{2}{2} = 122$   
 $\frac{4x}{2} + \frac{2}{2} = \frac{244}{2}$   
 $2x + 1 = 122$   
 $2x = 121$   
 $x = 60.5$

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15) alt. int.  
 $4x + 1 = 81$   
 $4x = 80$   
 $x = 20$

16) alt. ext.  
 $76 = 2x$   
 $x = 35$

17) alt. int.  
 $\frac{2x}{2} = \frac{108}{2}$   
 $x = 54$

18) alt. int.  
 $4x + 3 = 20$   
 $4x = 17$   
 $x = 4.25$

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Geometry Groupwork \_\_\_\_\_ Name \_\_\_\_\_ ID: 1  
 Parallel lines, transversals, & relationships \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_\_  
 Find the measure of angle b.

1) alt. int.  
 $b = 127^\circ$

2) alt. int.  
 $b = 120^\circ$

3) alt. int.  
 $b = 111^\circ$

4) alt. int.  
 $b = 117^\circ$

Name the relationship: alternate interior, corresponding, or alternate exterior.

5) alt. int.  
 6) alt. ext.

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7) alt. int.  
 $b = 127^\circ$

8) alt. int.  
 $b = 120^\circ$

9) alt. int.  
 $b = 111^\circ$

10) alt. int.  
 $b = 117^\circ$

Find the measure of angle b.

11) alt. int.  
 $b = 127^\circ$

12) alt. int.  
 $b = 120^\circ$

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13)

14)

15)

16)

Find the value of  $x$ .

17)

18)

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19)

20)

21)

22)

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Unit 2, Lesson 1

Parallel Lines Cut by a Transversal

Given Lines  $AB$  and  $CD$  are parallel. Another line  $EF$  cuts across the two parallel lines.

1) The two angles that sit on opposite sides of a transversal, inside the parallel lines are called \_\_\_\_\_ angles and would be congruent.

2) The two angles that sit on the same side of a transversal and in the same location are called \_\_\_\_\_ angles and are congruent.

3) Solve for  $x$  and  $y$ , then find angle  $k$ .

$x = \underline{\hspace{2cm}}$   $y = \underline{\hspace{2cm}}$   $k = \underline{\hspace{2cm}}$

4) Find the measure of the alternate exterior angles in the diagram below.

$x = \underline{\hspace{2cm}}$  Angle measure = \_\_\_\_\_

5) Find the value of  $x$ .

$x = \underline{\hspace{2cm}}$

6) Find the value of  $x$ .

$x = \underline{\hspace{2cm}}$

Properties of Angles

7) Two angles add to  $90$  degrees, they are called \_\_\_\_\_ angles.

8) Two adjacent angles who's sum add to  $180$  degrees are called \_\_\_\_\_ angles.

9) When two lines intersect, there are two pairs of opposite angles that are called \_\_\_\_\_ angles.

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10) The measure of angle  $A$  is  $20^\circ$ . Find the complement of angle  $A$ .

11) The measure of an angle is  $30^\circ$ . Find the supplement of the angle.

12) In the diagram below,  $\angle 1$  and  $\angle 2$  are a linear pair. The  $m\angle 1 = x$  and  $m\angle 2 = 3x + 1$ . Find the measure of each angle.

For questions 13-15, use the diagram to tell whether the angles are vertical angles, a linear pair, or neither.

13)  $\angle 1$  and  $\angle 3$  \_\_\_\_\_

14)  $\angle 2$  and  $\angle 3$  \_\_\_\_\_

15)  $\angle 3$  and  $\angle 4$  \_\_\_\_\_

5 Bonus Points: Solve for ALL angles in the diagram below. Label all four angle measures.

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January 17, 2019, Thursday

Identify each pair of angles as corresponding, alternate interior, alternate exterior, same-side interior, vertical, or adjacent.

1)

Find the measure of each angle indicated.

2)

Solve for  $x$ .

3)

Find the measure of the indicated angle that makes lines  $u$  and  $v$  parallel.

4)



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Geogebra, triangle sum theorem

What did you see....did you know this?



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Geometry \_\_\_\_\_ Name \_\_\_\_\_ ID: 1  
 Triangle Sum of Interior Angles = 180 degrees Date \_\_\_\_\_ Period \_\_\_\_\_  
 Find the measure of each angle indicated.

1)  2) 



3)  4) 

Solve for x.



5)  6) 



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7)  8) 

Find the measure of angle A.



9)  10) 



11)  12) 

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Find the measure of each angle indicated.

13)  14) 


15)  16) 


Find the measure of each angle indicated. (Hint you may need some of your prior knowledge about angle relationships...)


17) 

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18) 



19) 



20) 



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

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Geometry \_\_\_\_\_ Name \_\_\_\_\_ ID: 1  
 Isosceles & Equilateral Triangle Relationships Date \_\_\_\_\_ Period \_\_\_\_\_  
 Find the value of x for either the missing angle or the side of the triangles.

1)  2) 



3)  4) 



5)  6) 



7)  8) 



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9)  10) 

11)  12) 

13)  $m\angle 2 = x + 121$   14)  $m\angle 2 = 157 + x$  

15)  $m\angle 2 = x + 64$   16)  $m\angle 2 = 20x - 3$  

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Use technology to define the following triangles:

- Equilateral
- Isosceles
- Scalene

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January 18, 2019, Friday

Explore congruency with

<https://www.mathopenref.com/congruenttriangles.html>

Reference

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### Congruent Triangles

*Definition: Triangles are congruent when all corresponding sides and interior angles are congruent. The triangles will have the same shape and size, but one may be a mirror image of the other.*

In the simple case below, the two triangles PQR and LMN are congruent because every corresponding side has the same length, and every corresponding angle has the same measure. The angle at P has the same measure (in degrees) as the angle at L, the side PQ is the same length as the side LM etc.

**Try this** Drag any orange dot at P,Q,R. The other triangle LMN will change to remain congruent to it.

Full screen | Print | RESET

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### Proving Triangles Congruent

(SSS, SAS, ASA, AAS, HL)

Triangles are congruent when you have:

- SSS
- SAS
- HL
- AAS
- ASA

Jan 10-3:04 PM

Let's discover how to write triangle congruence statements...

TerryV, How to write triangle congruence statements

Jan 10-3:29 PM

Geometry \_\_\_\_\_ Name \_\_\_\_\_ ID: 1

Triangle Congruence \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_\_

State if the two triangles are congruent. If they are, state how you know.

- 
- 
- 
- 
- 
- 
- 
- 
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