

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

Jan 10-1:05 PM

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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 THE MIDDLE LETTER.

8. Use the angle addition postulate to find the missing measurements.

11)  $m\angle HJ = 152^\circ$  and  $m\angle IJ = 60^\circ$ . Find  $m\angle FJ$ .

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

13)  $m\angle CDK = 107^\circ$  and  $m\angle KDE = 85^\circ$ . Find  $m\angle CDE$ .

14)  $m\angle FGH = 52^\circ$  and  $m\angle ZGH = 94^\circ$ . Find  $m\angle FGH$ .

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

16)  $m\angle FGH = 52^\circ$  and  $m\angle GHJ = 70^\circ$ . Find  $m\angle FGH$ .

17) Adjacent linear pair  
18) adjacent (or) complementary  
19) adjacent (or) complementary  
20) vertical angles  
21) adjacent (or) complementary  
22) adjacent (or) complementary

Jan 10-12:13 PM

angle addition postulate

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

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

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

Jan 15-12:04 PM

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

14) Find  $m\angle FGH$  if  $m\angle FGH = 52^\circ$  and  $m\angle ZGH = 94^\circ$ .

15) Find  $m\angle JKL$  if  $m\angle JKL = 107^\circ$  and  $m\angle MKL = 85^\circ$ .

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

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

17) Adjacent linear pair  
18) adjacent (or) complementary  
19) adjacent (or) complementary  
20) vertical angles  
21) adjacent (or) complementary  
22) adjacent (or) complementary

Jan 10-12:50 PM

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)  $5x + 23 = 90$   
 $5x = 67$   
 $x = 13$

30)  $66 + 1x - 9 = 90$   
 $57 + 1x - 90 = 90$   
 $1x = 33$   
 $x = 33$

Jan 10-12:50 PM

31)  $x - 31 = h$

Supplementary = 180

32)  $b + 23 = 180$   
 $b = 157$

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

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

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

Jan 10-12:50 PM

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)  $h = 74^\circ$

43)  $h = 171^\circ$

44)  $h = 74^\circ$

45)  $h = 171^\circ$

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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 = 180°

Jan 10-12:14 PM

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)  $h = 55^\circ$

10)  $h = 35^\circ$

Jan 10-12:16 PM

11)  $h = 44^\circ$

12)  $h = 53^\circ$

Find the value of x.

13)  $4x + 11 = 180$   
 $4x = 169$   
 $x = 42.25$

14)  $4x + 17 = 180$   
 $4x = 163$   
 $x = 40.75$

Find the measure of angle h.

15)  $h = 75^\circ$

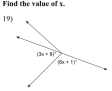
16)  $h = 90^\circ$


17)  $h = 15^\circ$

18)  $h = 80^\circ$


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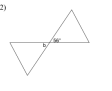
Find the value of  $x$ .


19) 

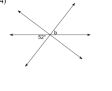
20) 

Find the measure of angle  $b$ .

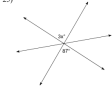
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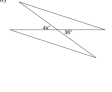
22) 

23) 

24) 

Find the value of  $x$ .


25) 


26) 

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
Jan 10-12:16 PM


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) 

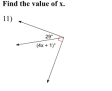
9) 


10) 


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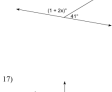
Find the value of  $x$ .

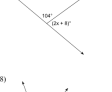
11) 


12) 


13) 

14) 

15) 

16) 

17) 


18) 


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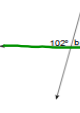
January 16, 2019, Wednesday

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

1)  Linear pair

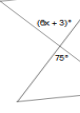
2)  Complementary

Find the measure of angle  $b$ .

3)  75

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

Find the value of  $x$ .

4)   $3x + 3 = 75$   
 $-3 -3$   
 $3x = 72$   
 $x = 24$

Jan 10-12:16 PM

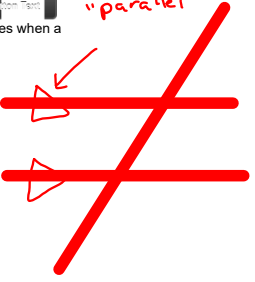
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Geogebra, Exploring parallel lines cut by a transversal

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

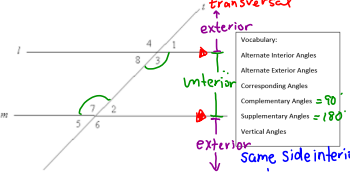
*"parallel"* *trans* *versal*



Jan 10-2:50 PM

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 equal  
 1 and 3 are Supplementary equal  
 1 and 4 are Alternate Exterior equal  
 2 and 5 are Vertical equal  
 2 and 6 are Complementary Angles = 90°  
 2 and 7 are Alternate Interior = 90°  
 3 and 2 are Supplementary Angles = 180°  
 3 and 7 are alternate interior  
 4 and 1 are Corresponding equal  
 4 and 6 are alternate exterior  
 4 and 5 are same side exterior  
 5 and 4 are supplementary

Jan 10-12:18 PM

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.  
 $4x + 2 = 74$   
 $4x = 72$   
 $x = 18$

14) alt. ext.  
 $4x + 2 = 122$   
 $4x = 120$   
 $x = 30$

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

16) alt. int.  
 $7x = 35$   
 $x = 5$

17) alt. int.  
 $2x = 54$   
 $x = 27$

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

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Jan 10-12:22 PM

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

1) alt. int.  
 $b = 73^\circ$

2) alt. int.  
 $b = 44^\circ$

3) alt. int.  
 $b = 69^\circ$

4) alt. int.  
 $b + 46 = 90$   
 $b = 44$

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

5) alt. int.  
 6) corresponding

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Jan 10-12:23 PM

7) alt. int.  
 $b = 167^\circ$

8) alt. int.  
 $b = 128^\circ$

9) alt. int.  
 $b = 124^\circ$

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

Find the measure of angle b.

11) alt. int.  
 $b = 73^\circ$

12) alt. int.  
 $b = 128^\circ$

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Jan 10-12:24 PM

Unit 2, 5.1.1  
Name: \_\_\_\_\_

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 lie on opposite sides of a transversal, outside the parallel lines are called alt. ext. angles. They are congruent and would be congruent.

2) The two angles that lie on the same side of a transversal and in the same region are called corresponding angles and are congruent.

3) Solve for x and y, then find angles.

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

5) Find the value of x.

Properties of Angles

7) If two angles add to 90 degrees, they are called complementary.

8) Two adjacent angles who's sum add to 180 degrees are called a supplementary/linear pair.

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

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Jan 16-1:33 PM

10) The measure of angle A is 20. Find the complementary angle, angle B.

$$\begin{aligned} \angle A + \angle B &= 90 \\ 20 + \angle B &= 90 \\ \angle B &= 70 \end{aligned}$$

11) The measure of an angle is 30. Find the complementary angle, angle C.

$$\begin{aligned} \angle A + \angle C &= 180 \\ 30 + \angle C &= 180 \\ \angle C &= 150 \end{aligned}$$

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

$$\begin{aligned} \angle 1 + \angle 2 &= 180 \\ x + 2x &= 180 \\ 3x &= 180 \\ x &= 60 \end{aligned}$$

13)  $\angle 1$  and  $\angle 3$  are vertical angles.

14)  $\angle 2$  and  $\angle 4$  are a linear pair.

15)  $\angle 1$  and  $\angle 2$  are supplementary.

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

$$\begin{aligned} 2x + 100 &= 180 \\ -100 &= -100 \\ 2x &= 80 \\ x &= 40 \end{aligned}$$

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Jan 16-1:34 PM

January 17, 2019, Thursday

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

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)

$$\begin{aligned} 7x + 8 &= 64 \\ -8 &= -8 \\ 7x &= 56 \\ x &= 8 \end{aligned}$$

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

4)

ext corresponding  $\angle s = A$

int.  $P + 106 = 180$

ext  $-106 = -106$

Same side interior = 180

? = 74

? = 106



Jan 10-12:24 PM



Geogebra, triangle sum theorem

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



Jan 10-2:51 PM

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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Jan 10-12:25 PM

7)  8) 

Find the measure of angle A.



9)  10) 



11)  12) 

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Jan 10-12:25 PM

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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Jan 10-12:26 PM

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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Jan 10-12:41 PM

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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Jan 10-12:42 PM

Use technology to define the following triangles:

- Equilateral
- Isosceles
- Scalene

Jan 10-2:57 PM

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

Jan 10-12:42 PM

### 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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