

August 20, 2018

Draw a supplementary angle
 Draw a complementary angle
 What do supplementary angles = ?
 What do a complementary angles = ?

complementary = 90°
 supplementary = 180°

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

1) obtuse
 2) Right
 3) obtuse
 4) Straight
 5) acute
 6) acute

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\sphericalangle = angle symbol

Name each angle in four ways.

7) \sphericalangle EDC
 \sphericalangle CDE
 \sphericalangle D
 \sphericalangle 5

8) \sphericalangle FGH
 \sphericalangle HGF
 \sphericalangle G
 \sphericalangle 6

9) \sphericalangle H
 \sphericalangle D
 \sphericalangle 5
 \sphericalangle HGF
 \sphericalangle EGH
 \sphericalangle G
 \sphericalangle 1

10) \sphericalangle JKL
 \sphericalangle LKJ
 \sphericalangle K
 \sphericalangle 5

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Use the angle addition postulate to find the missing measurements.

11) $m\angle HJL = 152^\circ$ and $m\angle HIF = 60^\circ$. Find $m\angle FLJ$.
 \sphericalangle HIF + \sphericalangle FLJ = \sphericalangle HJL
 $60^\circ + x = 152^\circ$
 -60°
 $x = 92^\circ$

12) $m\angle QRS = 135^\circ$ and $m\angle QRH = 74^\circ$. Find $m\angle HRS$.
 \sphericalangle SRH + \sphericalangle QRH = \sphericalangle QRS
 $x + 74^\circ = 135^\circ$
 -74°
 $x = 61^\circ$

13) Find $m\angle CDK$ if $m\angle KDE = 160^\circ$ and $m\angle CDE = 180^\circ$.
 \sphericalangle CDK + \sphericalangle KDE = \sphericalangle CDE
 $x + 160^\circ = 180^\circ$
 -160°
 $x = 20^\circ$
 \sphericalangle OK = 20°

14) $m\angle JKL = 107^\circ$ and $m\angle MKL = 85^\circ$. Find $m\angle JKM$.
 \sphericalangle JKM + \sphericalangle MKL = \sphericalangle JKL
 $x + 85^\circ = 107^\circ$
 -85°
 $x = 22^\circ$
 \sphericalangle JKM = 22°

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15) $m\angle FGZ = 52^\circ$ and $m\angle ZGH = 94^\circ$. Find $m\angle FGH$.
 \sphericalangle FGZ + \sphericalangle ZGH = \sphericalangle FGH
 $52^\circ + 94^\circ = x$
 $146^\circ = x$

16) Find $m\angle JIH$ if $m\angle JIG = 70^\circ$ and $m\angle GH = 52^\circ$.
 \sphericalangle GIH + \sphericalangle JIG = \sphericalangle JIH
 $52^\circ + 70^\circ = x$
 $122^\circ = x$
 $122^\circ = \sphericalangle$ JIH

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

17) linear pair
 18) linear pair = Supplementary angle \sphericalangle 180°
 19) complementary
 20) vertical
 21) adjacent
 22) complementary

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Using vertical pairs, find the measure of angle b.

23) Vertical angles are equal
 $b = 73^\circ$

24) Vertical angles are equal
 $b = 52^\circ$

25) Vertical angles are equal
 $b = 59^\circ$

26) Vertical angles are equal
 $b = 35^\circ$

27) Complementary angle
 $b + 64 = 90^\circ$
 $-64 \quad -64$
 $b = 26$

28) Complementary angle
 $b + 35 = 90^\circ$
 $-35 \quad -35$
 $b = 55^\circ$

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Using complementary angles, find the value of x.

29) Combine like terms
 $5x + 2 + 23 = 90$
 $5x + 25 = 90$
 $-25 \quad -25$
 $5x = 65$
 $\frac{5x}{5} = \frac{65}{5}$
 $x = 13$

30) Like terms
 $x - 9 + 66 = 90$
 $x + 57 = 90$
 $-57 \quad -57$
 $x = 33$

31) line
 $x - 3 + 2x = 90$
 $3x - 3 = 90$
 $+3 \quad +3$
 $3x = 93$
 $\frac{3x}{3} = \frac{93}{3}$
 $x = 31$

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Using linear pairs, find the measure of angle b.

32) $\hat{=} 180^\circ$
 $123 + b = 180$
 $-123 \quad -123$
 $b = 57^\circ$

33) $b + b = 180$
 $-b \quad -b$
 $b = 119^\circ$

34) $b + 48 = 180$
 $-48 \quad -48$
 $b = 132$

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Find the value of x.

35) line
 $4x + 3 + 77 = 180$
 $4x + 80 = 180$
 $-80 \quad -80$
 $4x = 100$
 $\frac{4x}{4} = \frac{100}{4}$
 $x = 25$

36) $x = 34$

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Complementary Angles: Find the measure of angle b.

38) $b + 67 = 90$
 $-67 \quad -67$
 $b = 23$

39) $b + 36 = 90$
 $-36 \quad -36$
 $b = 54$

40) $b + 63 = 90$
 $-63 \quad -63$
 $b = 27$

41) $b + 41 = 90$
 $-41 \quad -41$
 $b = 49$

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Supplementary Angles: Find the measure of angle b.

42) $b + 120 = 180$
 $-120 \quad -120$
 $b = 60$

43) $b + 29 = 180$
 $-29 \quad -29$
 $b = 151$

44) $b + 130 = 180$
 $-130 \quad -130$
 $b = 50$

45) $b + 92 = 180$
 $-92 \quad -92$
 $b = 88$

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August 21, 2018

Use tech:

What is a transversal in mathematics?

Draw a picture.

Aug 20-11:45 AM

Draw two parallel line & a transversal

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The angle relationships when parallel lines are cut by a transversal are

Alternate Interior Angles
alternate sides of the transversal and interior of the parallels

Same Side Interior Angles
Same side of the transversal and interior of the parallels

Alternate Exterior Angles
alternate sides of the transversal and exterior of the parallels

Same Side Exterior Angles
Same side of the transversal and exterior of the parallels

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Write the angle relationship for each pair of angles.

1 and 2 are _____
1 and 3 are _____
1 and 4 are _____
2 and 3 are _____
2 and 4 are _____
3 and 2 are _____
3 and 4 are _____
4 and 3 are _____
4 and 2 are _____
5 and 7 are _____

Alternate Interior Angles are _____
Alternate Exterior Angles are _____
Corresponding Angles _____
Complementary Angles _____
Supplementary Angles _____
Vertical Angles _____

1 and 5 are _____
2 and 6 are _____
3 and 7 are _____
4 and 8 are _____
1 and 8 are _____
2 and 7 are _____

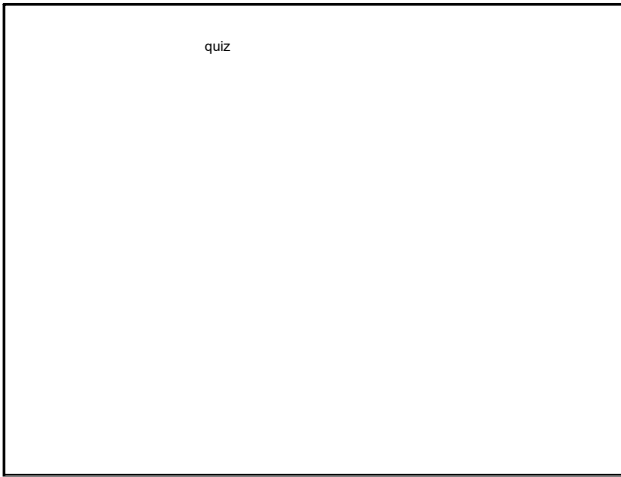
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transversal practice

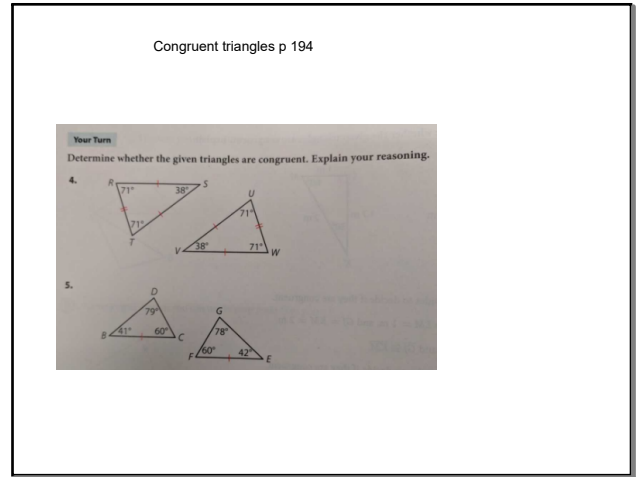
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Study Guide

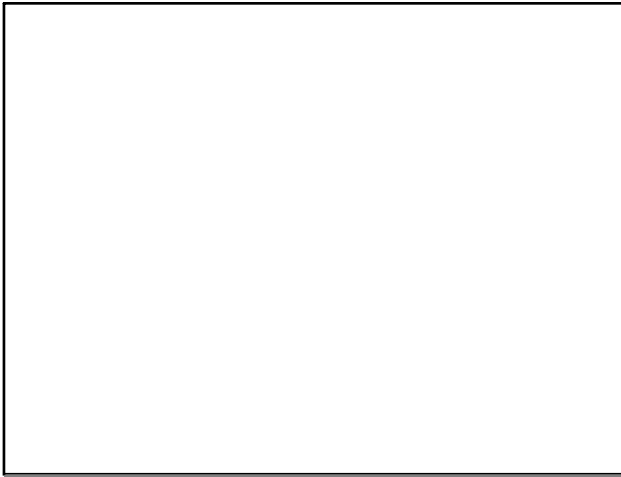
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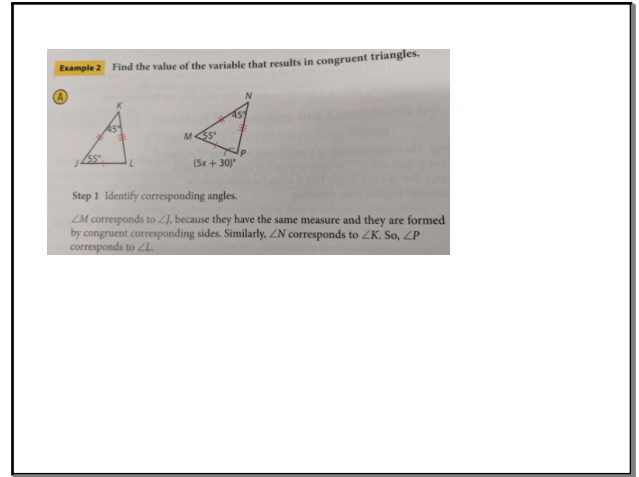
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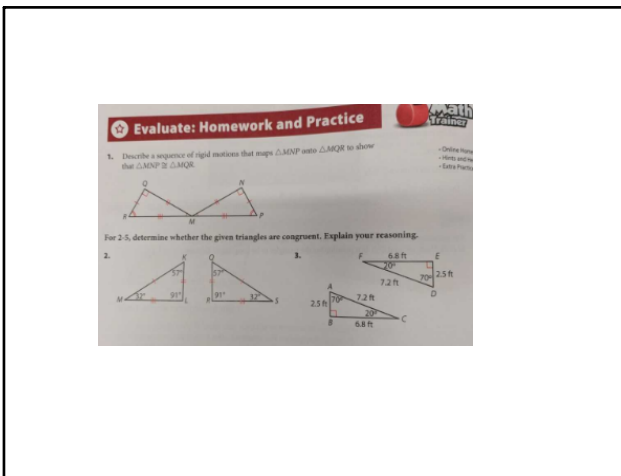
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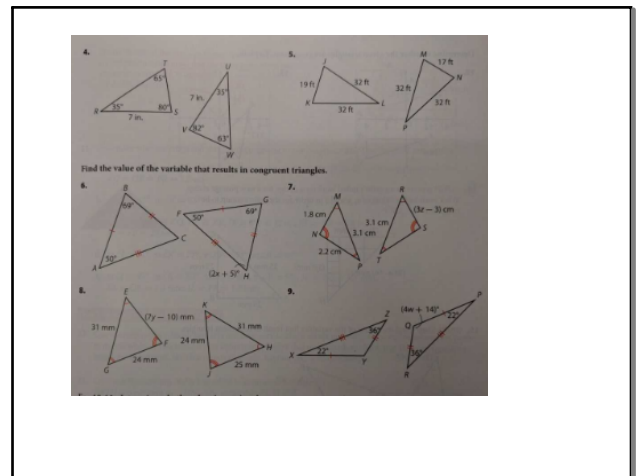
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Geogebra, interior triangle sum

Be ready to share what you noticed....

Try these!

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The Isosceles Triangle!

p 283, define
isosceles triangle
legs
vertex angle
base
base angle

Be ready to label your vocabulary on this isosceles triangle!

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The equilateral triangle

p 286 copy in your notebooks:
Equilateral Triangle Theorem
&
Converse of the Equilateral Triangle Theorem

Be ready to explain the markings on this triangle!

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p289 - let's practice

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Triangle Congruence..

What does congruence mean?

The Rules

p 203 copy ASA Triangle Congruence Theorem
p 222 copy SSS Triangle Congruence Theorem
p 227 copy AAS Triangle Congruence Theorem
p 256 copy HL Triangle Congruence Theorem

The Practice

p 206 #3-7
p 227 #4-11
p 250 #1-6
p 258 #1-5

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

- 1)
- 2)
- 3)
- 4)
- 5)
- 6)
- 7)
- 8)
- 9)
- 10)

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