

August 20, 2018

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

Aug 16-1:27 PM

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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Name each angle in four ways.

7) $\angle EDC$
 $\angle CDE$
 $\angle D$
 $\angle 5$

8) $\angle HGF$
 $\angle FGH$
 $\angle G$
 $\angle 1$

9) $\angle HGF$
 $\angle FGH$
 $\angle G$
 $\angle 1$

10) $\angle JKL$
 $\angle LKJ$
 $\angle K$
 $\angle 5$

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Use the angle addition postulate to find the missing measurements.

11) $m\angle HUI = 152^\circ$ and $m\angle HIF = 60^\circ$. Find $m\angle FIJ$.
 $\angle HIF + \angle FIJ = \angle HIJ$
 $60^\circ + x = 152^\circ$
 -60°
 $x = 92^\circ$

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

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

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

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

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

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

17) linear pair

18) adjacent/linear pair ✓

19) complementary

20) vertical

21) adjacent

22) complementary

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Using vertical pairs, find the measure of angle b.

23) vertical angle
 $b = 73$

24) $b = 52^\circ$

25) $b = 59^\circ$

26) $b = 35^\circ$

27) Complementary
 $b + 64 = 90$
 $-64 -64$
 $b = 26$

Complementary
 $b + 35 = 90$
 $b = 55$

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Using complementary angles, find the value of x.

29) $5x + 2 + 23 = 90$
 $5x + 25 = 90$
 $-25 -25$
 $5x = 65$
 $x = 13$

30) combine like terms
 $x - 9 + 66 = 90$
 $x + 57 = 90$
 $-57 -57$
 $x = 33$

31) line 180
 $2x + x - 3 = 90$
 $3x - 3 = 90$
 $+3 +3$
 $3x = 93$
 $x = 31$

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Using linear pairs, find the measure of angle b.

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

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

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

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Find the value of x.

35) $4x + 3 + 77 = 180$

36) $2x + 4 + 3x + 1 = 180$
 $5x + 18 = 180$
 $5x = 170$
 $x = 34$

37) $x + 18 + 6x + 1 = 180$
 $7x + 19 = 180$
 $7x = 161$
 $x = 23$

80, 34, 23, 18

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Complementary Angles: Find the measure of angle b.

38) $b + 67 = 90$
 $b = 23$

39) $36 + b = 90$
 $b = 54$

40) $63 + b = 90$
 $b = 27$

41) $41 + b = 90$
 $b = 49$

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Supplementary Angles: Find the measure of angle b.

42) $130 + b = 180$
 $b = 50$

43) $b + 29 = 180$
 $b = 151$

44) $138 + b = 180$
 $b = 42$

45) $b + 92 = 180$
 $b = 88$

Aug 17-7:32 AM

August 21, 2018
 Use tech:
 What is a transversal in mathematics?
 Draw a picture.

Aug 20-11:51 AM

Draw two parallel line & a transversal

Aug 17-2:37 PM

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.

Vocabulary:
 Alternate Interior Angles
 Alternate Exterior Angles
 Corresponding Angles
 Complementary Angles
 Supplementary Angles
 Vertical Angles

Handwritten notes:
 Same side interior = equal
 Same side exterior = equal
 Corresponding LS = equal
 Supplementary LS = equal
 Vertical LS = equal
 Alternate interior = equal
 Same side interior = 90°
 Alternate interior = 180°
 Corresponding LS = equal
 Alternate exterior = equal to 180°
 Same side exterior = equal to 180°
 Same side interior = equal to 180°
 Same side exterior = equal to 180°

Aug 17-2:46 PM

transversal practice
 Parallel lines, transversal & angle relationships Date: _____ Perio: _____

Find the measure of each angle indicated.

1)

3)

Solve for x.

4)

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6)

7)

9)

Find the value of x that makes lines u and v parallel.

11)

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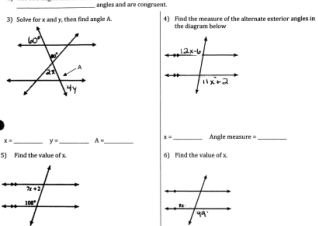
study guide

Unit 2 2.4.1 Name _____

Parallel Lines Cut by a Transversal

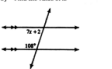
Given: Lines AB and CD are parallel. Another line EF cuts across the two parallel lines.

- The two angles that sit on opposite sides of a transversal, inside the parallel lines are called _____ angles and would be congruent.
- The two angles that sit on the same side of a transversal and in the same location are called _____ angles and are congruent.
- Solve for x and y , then find angle A .
- Find the measure of the alternate exterior angles in the diagram below.

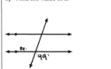


1) $x =$ _____ $y =$ _____ $A =$ _____

5) Find the value of x .



6) Find the value of x .



_____ Angle measure = _____

_____ $x =$ _____

Properties of Angles

- If two angles add to 90 degrees, they are called _____ angles.
- Two adjacent angles who's sum add to 180 degrees are called a _____.
- When two lines intersect, there are two pairs of opposite angles that are called _____ angles.

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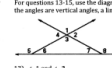
10) The measure of angle A is 50° . Find the measure of angle B .
 angle $B = 50^\circ$

11) The measure of an angle is 30° . Find the measure of its complement.
 $90^\circ - 30^\circ = 60^\circ$
 $\therefore \angle C = 60^\circ$

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.


$m\angle 1 = 60^\circ$ $m\angle 2 = 120^\circ$

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



- $\angle 1$ and $\angle 5$ _____
- $\angle 2$ and $\angle 3$ _____
- $\angle 3$ and $\angle 7$ _____

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



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quiz

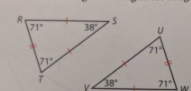
Aug 20-12:02 PM

Congruent triangles p 194

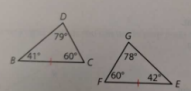
Your Turn

Determine whether the given triangles are congruent. Explain your reasoning.

4.



5.

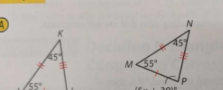


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quiz

Aug 17-2:45 PM

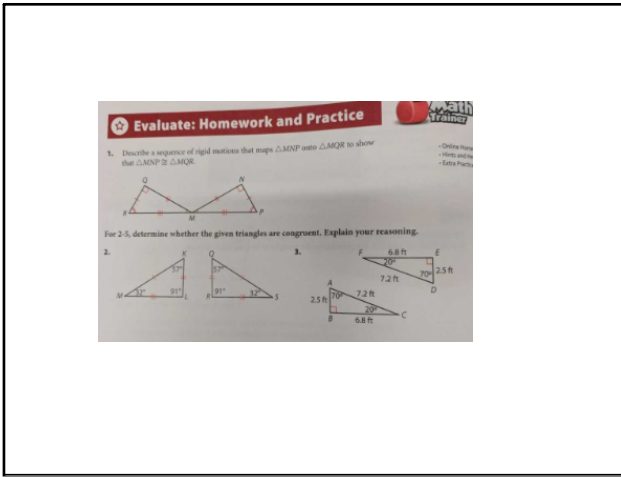
Example 2 Find the value of the variable that results in congruent triangles.



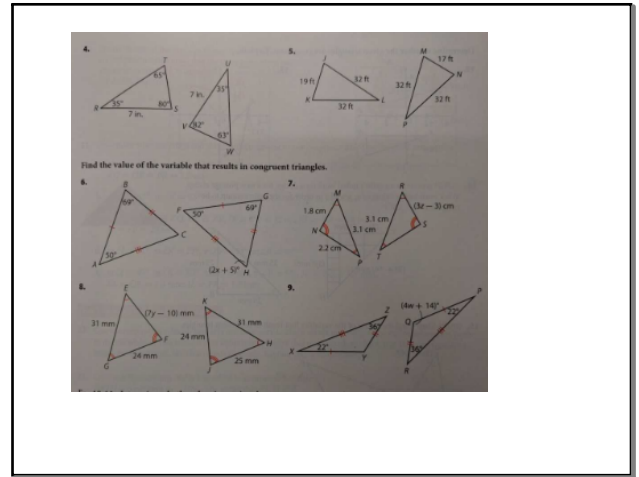
Step 1 Identify corresponding angles.

$\angle M$ corresponds to $\angle J$, because they have the same measure and they are formed by congruent corresponding sides. Similarly, $\angle N$ corresponds to $\angle K$. So, $\angle P$ corresponds to $\angle L$.

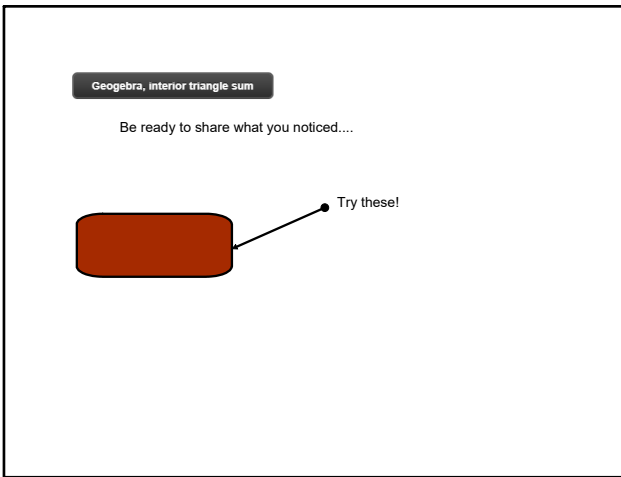
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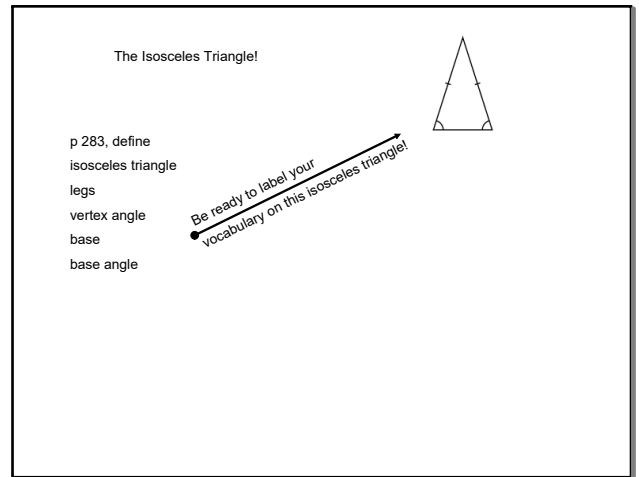
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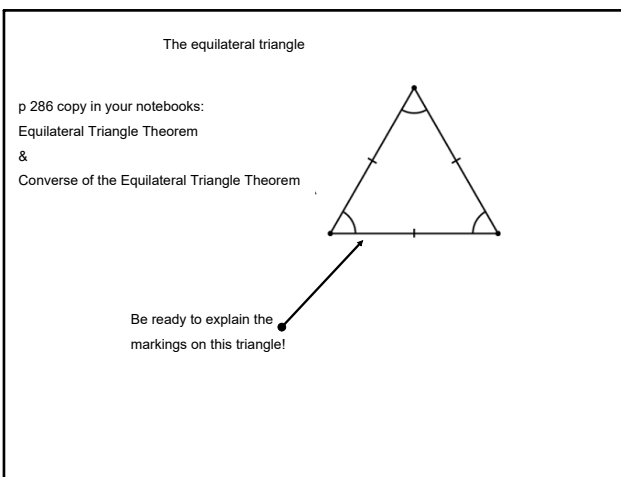
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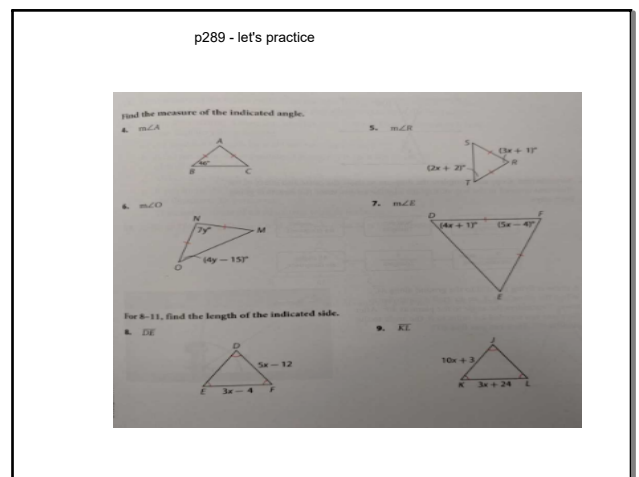
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Aug 17-2:04 PM



Aug 17-2:07 PM



Aug 17-2:09 PM

Triangle Congruence..

What does congruence mean?

The Rules	The Practice
p 203 copy ASA Triangle Congruence Theorem	p 206 #3-7
p 222 copy SSS Triangle Congruence Theorem	p 227 #4-11
p 227 copy AAS Triangle Congruence Theorem	p 250 #1-6
p 256 copy HL Triangle Congruence Theorem	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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