

11/28 Aim: Angle pairs

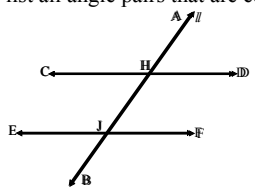
Get a calculator and a ruler and a piece of patty paper

Homework worksheet

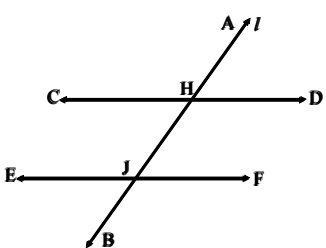
Nov 6-3:00 PM

Using your straightedge trace the pair of parallel lines and transversal on the patty paper.

With a partner list all angle pairs that are equal in measure

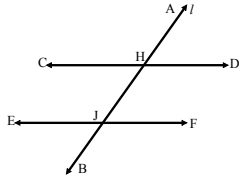


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Adjacent angles



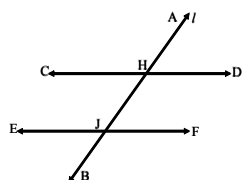
Name a pair of angles satisfy this condition?

Nov 17-10:06 AM

Angle pairs

Vocabulary

Transversal

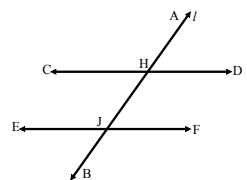


Interior angles

Exterior angles

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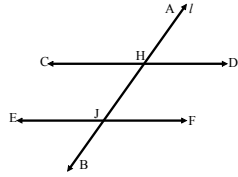
Linear pair



Name a pair of angles satisfy this condition?

Nov 17-10:07 AM

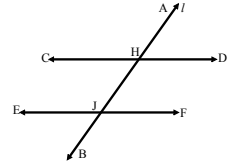
Vertical angles



Name a pair of angles satisfy this condition?

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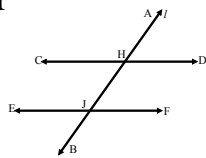
Corresponding angles



Name a pair of angles satisfy this condition?

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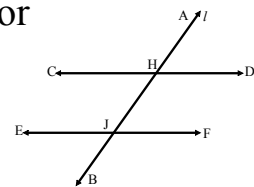
Alternate interior



Name a pair of angles satisfy this condition?

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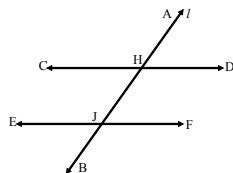
Alternate exterior



Name a pair of angles satisfy this condition?

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Interior angles on the same side of the transversal



Name a pair of angles satisfy this condition?

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Supplementary angles

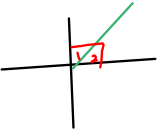
Two \angle 's that sum to 180°

Name a pair of angles satisfy this condition? $\angle 1 + \angle 2 = 180^\circ$
 $\angle 5 + \angle 8 = 180^\circ$

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Complimentary \angle 's

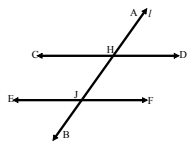
Two \angle 's that sum to 90°



$\angle 1 + \angle 2 = 90^\circ$

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complementary angles

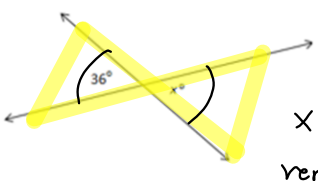


Name a pair of angles satisfy this condition?

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Determine the measure of the missing angle in each diagram.

A.

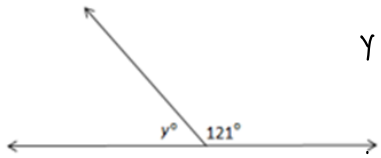


$X = 36^\circ$
vertical \angle 's \cong

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Determine the measure of the missing angle in each diagram.

B.

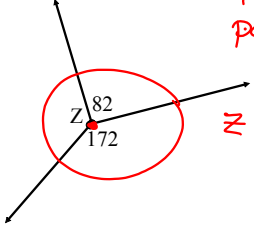


$y = 59^\circ$
a linear pair forms supplementary \angle 's

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Determine the measure of the missing angle in each diagram.

c.

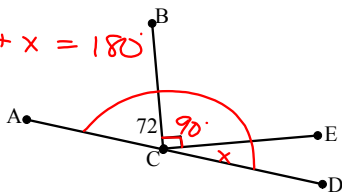


\angle 's around a point add to 360°

$Z + 82 + 172 = 360^\circ$
 $Z = 106^\circ$

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In the figure, line segment AD is drawn. Find $m\angle DCE$.



$72 + 90 + x = 180^\circ$
 $x = 18^\circ$

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The total measure of adjacent angles around a point is 360°.
Find the measure of $m\angle HKI$

$133 + 147 + \angle HKI = 360$
 $\angle HKI = 80$

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Vertical angle have equal measure. Two angles are vertical if their sides form opposite rays. Find $m\angle TRV$.

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Find the measures of each labeled angle. Give a reason for your solution.

$a + 145 = 180$
 $360 - 122 = 238$

Angle	Angle measure	Reason
$\angle a$	35°	Linear pairs form supplementary \angle 's
$\angle c$	40°	Vertical \angle 's are \cong
$\angle d$	140°	
$\angle a$	238°	\angle 's around a point sum to 360°

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In the figures below, AB, CD, and EF are straight line segments. Find the measure of each marked angle or find the unknown numbers labeled by the variables in the diagrams. Give the reasons for your calculations. Show all the steps to your solution.

1.

$\angle a =$ _____

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2.

$\angle b =$ _____

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$\angle c =$ _____

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4.

$\angle d =$ _____

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5.

$\angle g =$ _____

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For Problems 6-12, find the values of x and y . Show all work.

6.

$x =$ 80

$$2x + 85 + x + 35 = 360$$

$$3x = 240$$

$$x = 80$$

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7.

$y =$ 90 $x =$ 30

$$2x + y + x + y - x + y + x = 360$$

$$3x + 3y = 360$$

$$3x + 3(3x) = 360$$

$$3x + 9x = 360$$

$$12x = 360$$

$$x = 30$$

$$2x = y - x$$

$$+x \quad +x$$

$$\underline{3x = y}$$

$$3(30) = y$$

$$90 = y$$

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8.

$x =$ 20

$$x + 4x - 10 + 90 = 180$$

$$\underline{-90}$$

$$x + 4x - 10 = 90$$

$$5x = 100$$

$$x = 20$$

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9.

$x =$ 39

$$x - 10 + y + x - 11 = 180$$

$$2x + y - 21 = 180$$

$$2x + y = 201$$

$$2x + 3x + 6 = 201$$

$$5x = 195$$

$$x = 39$$

$$y = 3x + 6$$

$$y = 3(39) + 6$$

$$y = 123$$

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10.

$\frac{3}{4}x - 2 = 58$
 $x = 80$ $y = 122$
 $\frac{3}{4}x - 2 + 90 + \frac{2}{5}x = 180$
 $y + \frac{3}{4}x - 2 = 180$ $y + 58 = 180$ $\frac{23}{20}x = \frac{92}{20}$
 $y = 122$ $x = 80$

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11.

$4x - 2 + 30 = 68$
 $4x = 40$
 $x = 10$
 $x = 10$

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12.

$x = 27$ $y = 47$
 $2x + 1 + 3x + 10 + \frac{8}{9}x + 10 = 180$
 $\frac{53}{9}x = 159$
 $x = 27$
 $y - 3 + y = 3x + 10$
 $2y - 3 = 3(27) + 10$
 $2y = 94$
 $y = 47$

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Blank space for problem 12 solution.

Nov 20-1:50 PM