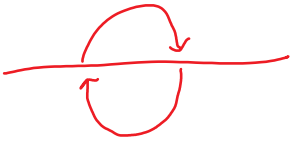
Day 1: Angles

Geometry: Angles



Vocabulary

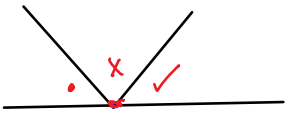
Acute angle: $0 < \theta < 90$ (between zero and 90 degrees)

Obtuse angle: $90 < \theta < 180$ (between 90 and 180 degrees)

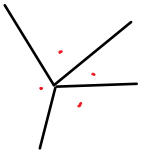
Complementary angles: 90 degrees

Supplementary angles: 180 degrees

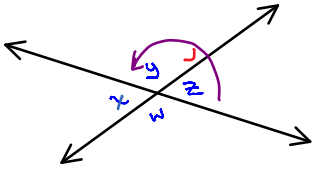
Angles on a line:



Angles at a point:



Opposite angles:



Congruent angles: equal size angles

Proof x = z

$\angle x + \angle y = 180°$

$\angle z + \angle y = 180°$

$\angle z = 180 - \angle y$

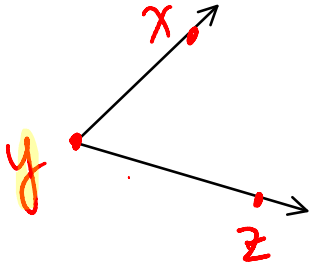
$\angle x = 180 - \angle y$

$\therefore \angle z = \angle x$

QED

"quod erat demonstrandum". It literally translates as "which was to be demonstrated"

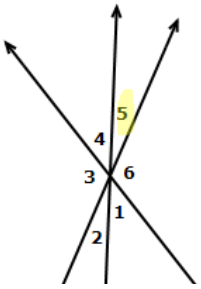
How to name an angle:



$\angle xyz$

$\angle zyx$

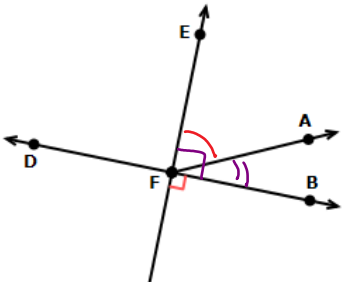
What is an angle that is adjacent to ∠5?

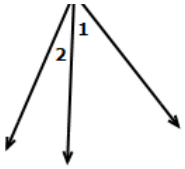


next to (beside)

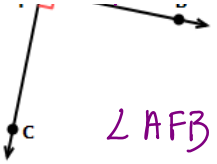
∠4 or ∠6

Which angle is complementary to ∠EFA?



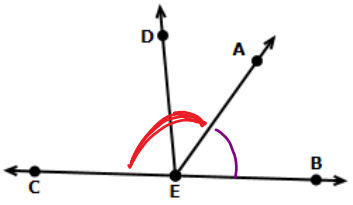


∠4 or ∠6



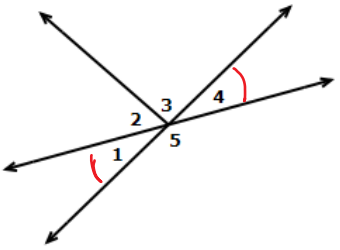
∠AFB

Which angle is supplementary to ∠*AEB*?



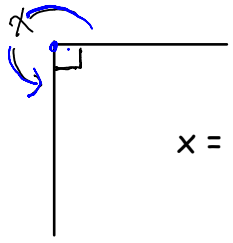
∠AEC

Which angles are congruent to ∠1? Select all that apply.

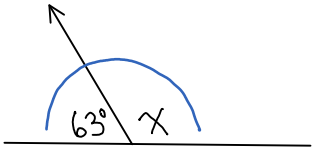


∠4

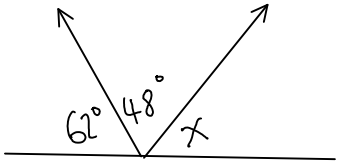
Find x



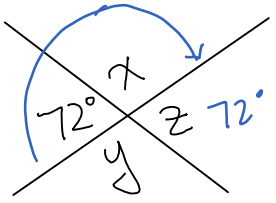
x = 270°



x = 117°



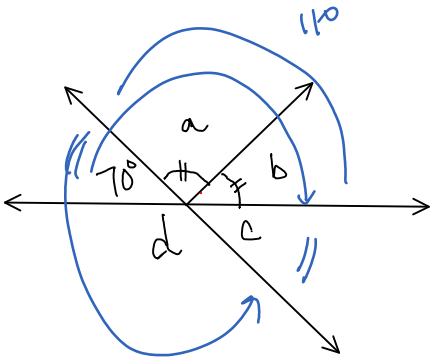
x = 110°



x= 108°

y = 108°

z = 72°



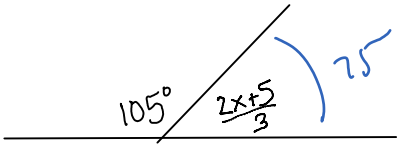
a= 55°

b = 55°

c = 70

d = 110

Challenge: Find x.



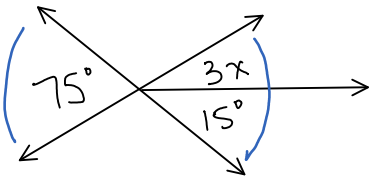
$\frac{2x+5}{3} + 105 = 180$

$3\left(\frac{2x+5}{3}\right) = (75)3$

$2x+5 = 225$

$2x = 220$

$x = 110$



$3x+15 = 75$

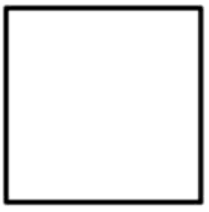
$3x = 60$

$x = 20$

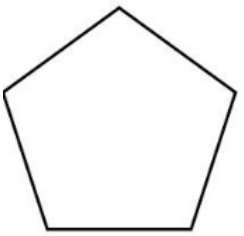
Assign p① and ② in Geom Booklet

Finding the interior angle sum of a polygon:

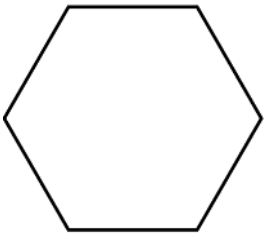
square



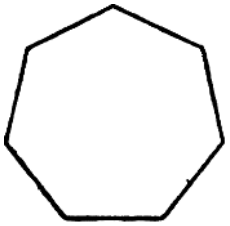
pentagon



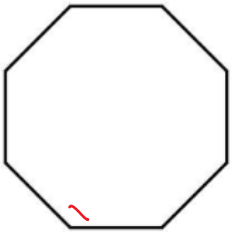
hexagon



heptagon



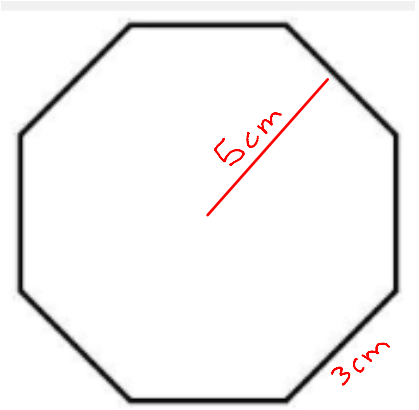
octagon



n-sided polygon

Formula?

Find each angle if the polygon is regular.


5cm
3cm