HW
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Geometry

Chapter 1
Section 1-4

Vocabulary

Angle	Made up of two rays with the same endpoint
Angle Sides	The two rays that make up an angle
Vertex	The common endpoint of two rays that make up an angle

How to name an angle (by number or by points) angle 1, angle ABC=CBA

More Vocabulary

Angle Measure ($m\angle$)	Number between 0 and 180 that describes the space between rays, can be obtained using a protractor
Congruent Angles	Two angles that have the same measure

Measure corresponds to the degrees of an angle
Congruent angles are marked with same number of arcs on the interior of the angle

Angles

You can classify an angle based on its measure.

take note

Key Concept Types of Angles

acute angle	right angle	obtuse angle	straight angle
			
$0 < x < 90$	$x = 90$	$90 < x < 180$	$x = 180$

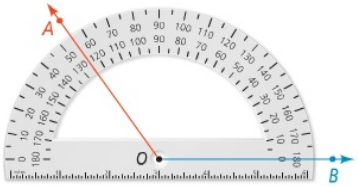
Box denotes right angle
Two right angles with a common side make a straight angle 90+90=180

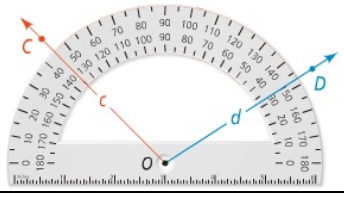
Measuring Angles

take note

Postulate 1-7 Protractor Postulate

Consider $\overrightarrow{OB}$ and a point A on one side of $\overrightarrow{OB}$. Every ray of the form $\overrightarrow{OA}$ can be paired one to one with a real number from 0 to 180.





Similarly, you can measure an angle by subtracting the lower measurement from the upper measurement

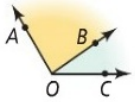
m∠ COD = 135 - 33 = 102

Angle Addition

take note

Postulate 1-8 Angle Addition Postulate

If point B is in the interior of $\angle AOC$, then $m\angle AOB + m\angle BOC = m\angle AOC$.



m ∠ AOC=105 m ∠ AOB=83 m ∠ BOC=?	m ∠ AOC=111 m ∠ AOB=2(m ∠ BOC) m ∠ BOC=?	m ∠ AOC=x+95 m ∠ AOB=2x+3 m ∠ BOC=3x−8 x=?

105-83=22

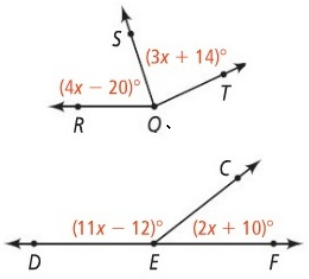
AOC=AOB+BOC
111=2BOC + BOC
111= 3BOC
37=BOC

AOC=AOB+BOC
x+95=2x+3+3x-8
x+95=5x-5
100=4x
25=x

More Angle Addition

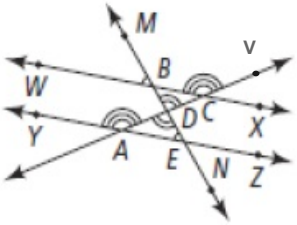
∠DEF is a straight angle. Find x.
Then Find m∠RQT.

**Remember: Many angles are not drawn to scale



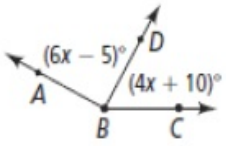
Hint: Many angles are not drawn to scale (The picture is not always a hint)
DEC+CEF=DEF, (11x-12)+(2x+10)=180, 13x-2=180, 13x=182, x=14
RQT = RQS+SQT = (4x-20)+(3x+14) = 7x-6 = 7(14)-6 = 98-6 = 92º

Congruent Angles



What angle is congruent to ∠YAC?

Is ∠NED congruent to ∠MBC?



∠ABD is congruent to ∠CBD. Solve for x.

Use x found above to find m∠ABC?

BCV (same as VCB, VCW, WCV)
15/2
Yes
10x+5 = 10(7.5)+5 = 75+5 = 80

ABD=CBD, 6x-5=4x+10, 2x=15, x=7.5 or

ABC = ABD+CBD = (6x-5)+(4x+10) =

Homework

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