HGEO

Lesson Title 1.5 Measuring & Constructing Angles **Date** _____

Tasks

1. $PQ = RS$ $\overline{PQ} \cong \overline{RS}$

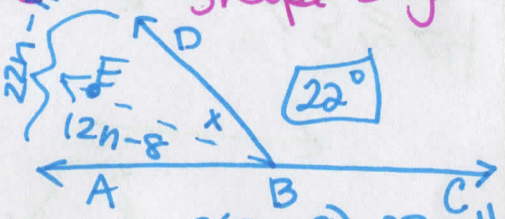
measure = shape segment

$2x+7+28=4x$

$2x+35=4x$

$35=2x$

$x=\frac{35}{2}$



$2(12n-8)=22n-11$

$24n-16=22n-11$

$24n=22n+5$

$2n=5$

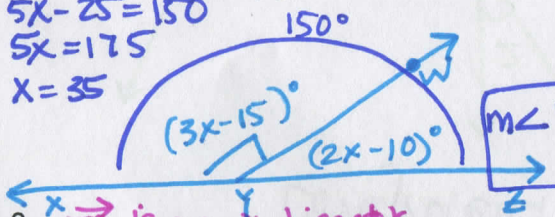
$n=\frac{5}{2}$

2. $3x-15+2x-10=150$

$5x-25=150$

$5x=175$

$x=35$



$m\angle WYZ = 60°$

3. $\overrightarrow{TR}$ is an $\angle$ bisector.

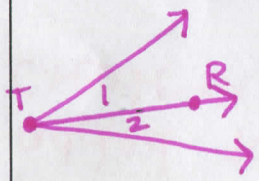
$m\angle 1 = 2x+10$

$m\angle 2 = 3x-18$

$2x+10=3x-18$

$28=x$

$m\angle 1 = m\angle 2 = 66°$

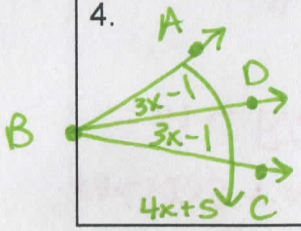


4. $3x-1+3x-1=4x+5$

$6x-2=4x+5$

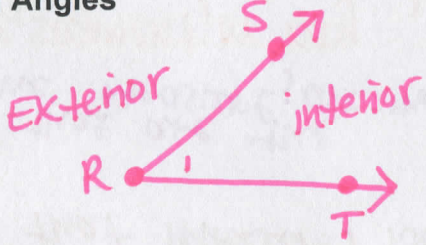
$2x=7$

$x=\frac{7}{2}$



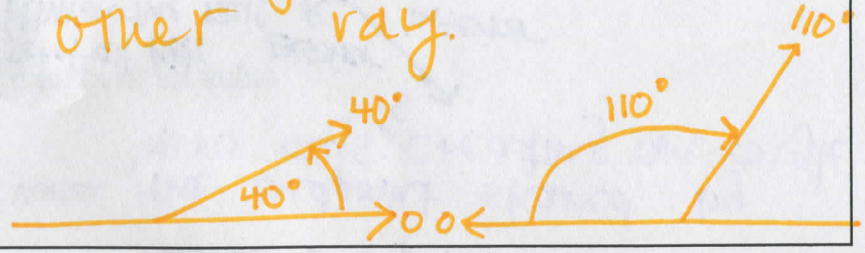
Naming Angles

- $\angle R$
- $\angle 1$
- $\angle SRT$
- $\angle TRS$



Using Protractors

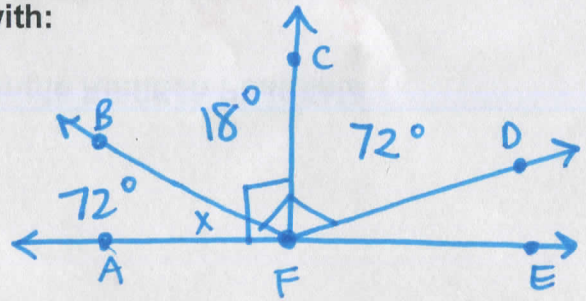
- put flat ray of angle pointing to 0.
- then add the degrees until you are at the other ray.



Still need help with:

90-72

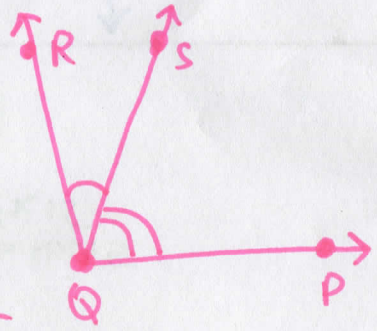
18



$x=72°$

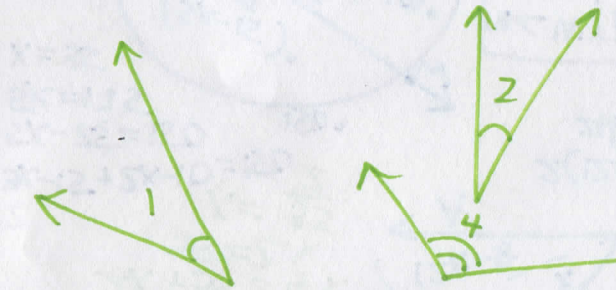
Angle Addition Postulate

$m\angle RQS + m\angle SQP = m\angle RQP$

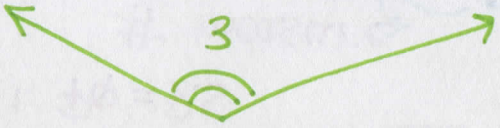


2 small ∠'s added together create the bigger angle.

Congruent Angles



$\angle 1 \cong \angle 2$



$\angle 3 \cong \angle 4$

Arc marks

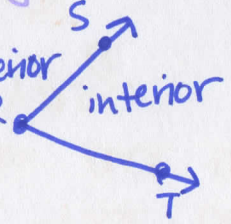
Vocabulary

Angle : two rays that share the same endpoint

Vertex : the endpoint shared by two rays; creating an angle

Interior of an angle : set of all points between the rays

Exterior of an angle : set of all points outside the rays



Measure : of an angle, usually in degrees
length in units : cm, m, mi, in . . . .

Degree : 360° in a circle. So 1 degree = $\frac{1}{360}$ of a circle.

Acute angle = an angle that measures between 0° & 90°

Right angle = an angle that measures 90°

Obtuse angle = an angle that measures between 90° & 180°

Straight angle = an angle that measures 180°

Congruent angles : angles that are the same measure; arc marks

Angle bisector = Any line, segment, or ray used to split an angle in half