

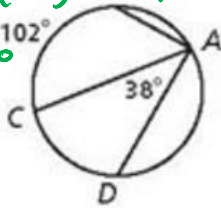
12-4 Inscribed Angles

Find each measure.

1. $m\angle BAC = \frac{1}{2}(102) = 51^\circ$

2. $m\widehat{CD} = 2(38) = 76^\circ$

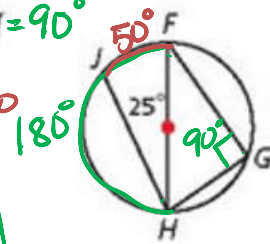
$m\angle BAC = 51^\circ$
 $m\widehat{CD} = 76^\circ$



3. $m\angle FGH = 90^\circ$

4. $m\widehat{JGF} = 360 - 50 = 310$

$m\angle FGH = 90^\circ$
 $m\widehat{JGF} = 310^\circ$

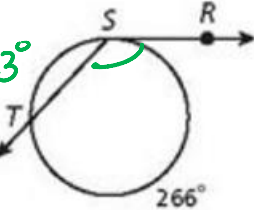


12-5 Angle Relationships in Circles

Find each measure.

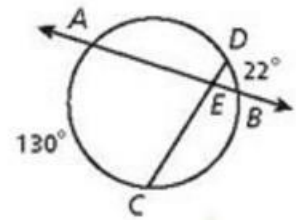
5. $m\angle RST = \frac{1}{2}(266) = 133^\circ$

$m\angle RST = 133^\circ$



6. $m\angle AEC = \frac{1}{2}(130 + 22)$

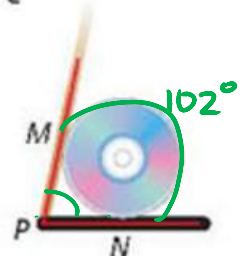
$m\angle AEC = 76^\circ$



7. A manufacturing company is creating a plastic stand for DVDs. They want to make the stand with $m\widehat{MN} = 102^\circ$. What should be the measure of $\angle MPN$?

$m\angle MPN = \frac{1}{2}(102) = 78^\circ$

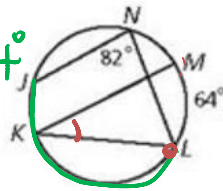
$m\angle MPN = 78^\circ$



Find each measure.

21. $m\widehat{JL} = 2(82) = 164^\circ$

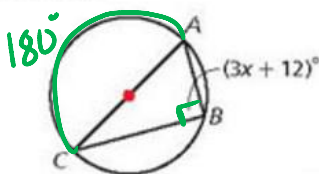
22. $m\angle MKL = \frac{1}{2}(164) = 82^\circ$



$m\widehat{JL} = 164^\circ$
 $m\angle MKL = 82^\circ$

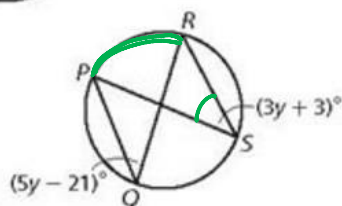
Find each value.

23. x



$m\angle ABC = 90^\circ$
 $90 = 3x + 12$
 $78 = 3x$
 $x = 26$

24. $m\angle RSP$



$m\angle RSP = m\angle PQR$
 $3y + 3 = 5y - 21$
 $24 = 2y$
 $y = 12$
 $m\angle RSP = 3(12) + 3 = 39^\circ$

Find each measure.

25. $m\widehat{MR} = 2(41) = 82$

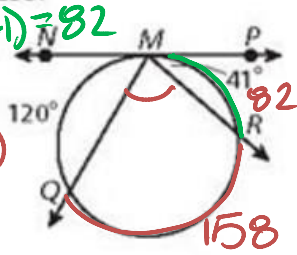
26. $m\angle QMR$

$360 - (120 + 82)$

$360 - 202$

158°

27. $m\angle GKH$

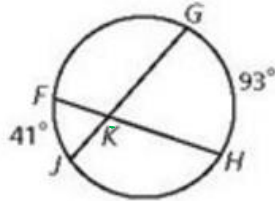


$m\angle QMR = \frac{1}{2}(158)$

$m\widehat{MR} = 82^\circ$

$m\angle QMR = 79^\circ$

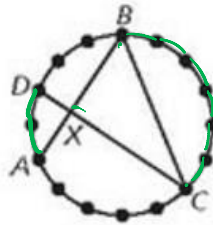
$m\angle QMR = 79^\circ$



$m\angle GKH = \frac{1}{2}(93 + 41)$

$m\angle GKH = 67^\circ$

28. A piece of string art is made by placing 16 evenly spaced nails around the circumference of a circle. A piece of string is wound from A to B to C to D. What is $m\angle BXC$?



$m\widehat{BC} = 6(22.5) = 135^\circ$

$m\widehat{DA} = 2(22.5) = 45^\circ$

$\frac{360}{16} = 22.5^\circ$ between each nail

$m\angle BXC = \frac{1}{2}(m\widehat{BC} + m\widehat{DA})$

$m\angle BXC = \frac{1}{2}(135^\circ + 45^\circ)$

$m\angle BXC = \frac{1}{2}(180^\circ)$

$m\angle BXC = 90^\circ$