



TEST Is Now
MONDAY, MAY 28th


Chapter 8: Notes

$$c^2 = a^2 + b^2$$

$$a^2 = c^2 - b^2$$


(SATT)

< ___ = 90° (Tang P)

< ___ = ___° (ins/cent >, )

(ITT)

< ___ = 90° (Chord P)

< ___ = ___° (ins >, )

(SAT)

(CAT)

___ = ___ (Chord P)

< ___ = ___° (ins >, diam)

(CyAT)

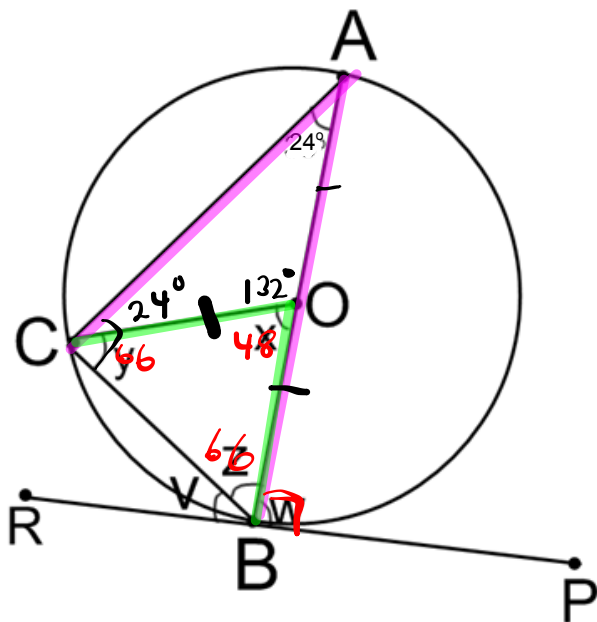
(OAT)

(EAT)

< ___ = ___° (CyQuad)

Warm Up

Do on your own



$$X = \angle COB = 48^\circ \text{ (Inc/Cent } \angle, BC \text{)}$$

$$w = \angle OBP = 90^\circ \text{ (Tang P)}$$

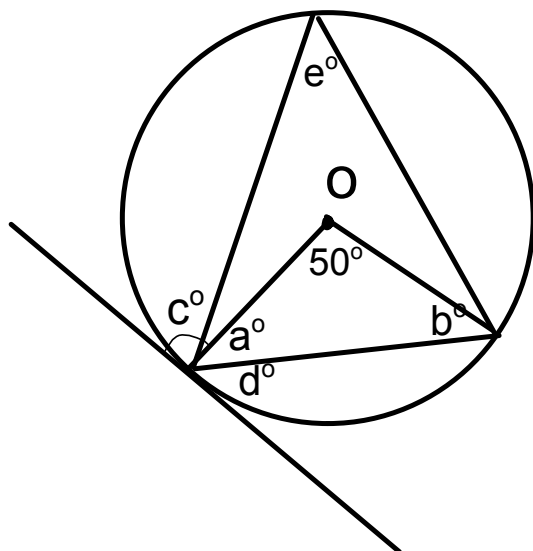
$$y = \angle OCB = 66^\circ \text{ (ITT)}$$

$$z = \angle OBR = 66^\circ \text{ (ITT)}$$

$$v = \angle CBR = 24^\circ \text{ (SAT)}$$

(or CAT)

Warm Up



$$a^\circ = 65^\circ \text{ (ITT)}$$

$$b^\circ = 65^\circ \text{ (ITT)}$$

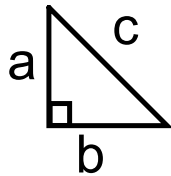
$$c^\circ = 90^\circ \text{ (Tang P)}$$

$$d^\circ = 25^\circ \text{ (CAT)}$$

$$e^\circ = 25^\circ \text{ (Inc/cent)}$$

Chapter 8: Notes

Pythagorean theorem

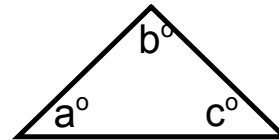


Hyp = ?
 $c^2 = a^2 + b^2$

Leg = ?
 $a^2 = c^2 - b^2$

Angle Sum of Triangle Theorem

(SATT)



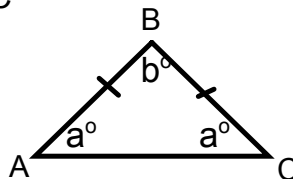
$$a^\circ + b^\circ + c^\circ = 180^\circ$$

Isosceles Triangle Theorem **(ITT)**

Two sides are equal : $AB = BC$

Base angles are equal:

$$\angle A = \angle C$$



If $a^\circ = ?$

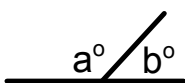
$$a^\circ = \frac{180 - b}{2}$$

If $b^\circ = ?$

$$b^\circ = 180 - a^\circ - a^\circ$$

Angle Properties

Supplementary Angle Theorem **(SAT)**



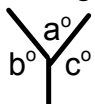
$$a^\circ + b^\circ = 180^\circ$$

Complimentary Angle Theorem **(CAT)**



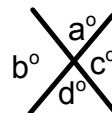
$$a^\circ + b^\circ = 90^\circ$$

Cyclic Angle Theorem **(CyAT)**



$$a^\circ + b^\circ + c^\circ = 360^\circ$$

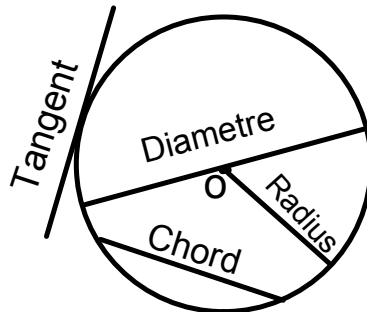
Opposite Angle Theorem **(OAT)**



$$a^\circ = d^\circ$$

$$b^\circ = c^\circ$$

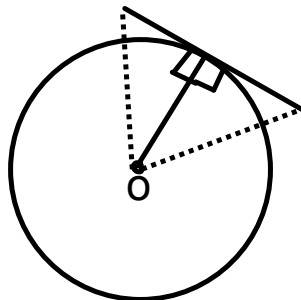
Information about circles



Tangent Property

$$\angle _ = 90^\circ \text{ (Tang P)}$$

- a radius hits a tangent at 90°



To solve unknown sides :
Pythagorean Theorem

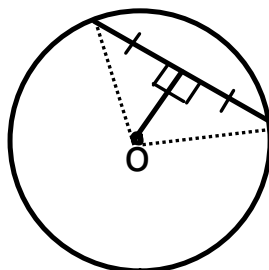
To solve unknown angles :
SATT

Chord Property

$$\text{If chord lengths are indicated} \\ \angle _ = \angle _ = 90^\circ \text{ (Chord P)}$$

a line coming from the centre of the circle

- hits chord at a 90° angle
- cuts the chord into two equal pieces



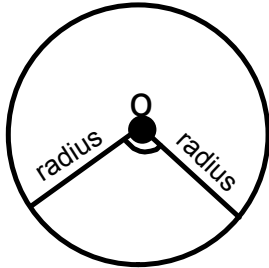
$$\text{If } 90^\circ \text{ is indicated} \\ _ = _ \text{ (Chord P)}$$

To solve unknown sides :
Pythagorean Theorem

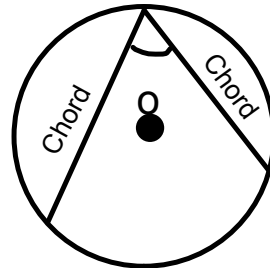
To solve unknown angles :
SATT
ITT

Circle Properties

Central Angle

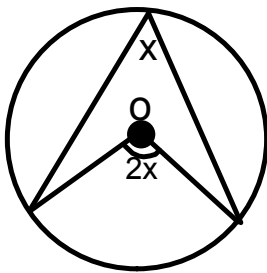


Inscribed Angle



Property # 1: Central & Inscribed Angles

$$\angle \text{---} = \text{---}^\circ \text{ (ins/cent >, \overset{\frown}{\text{---}})}$$

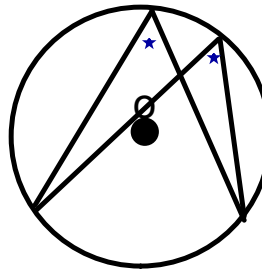


- The central angle is double the inscribed angle

- The inscribed angle is half the central angle

Property # 2: Inscribed Angles

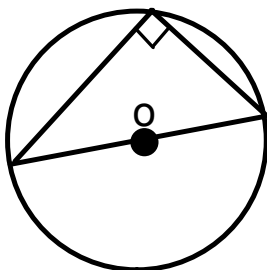
$$\angle \text{---} = \text{---}^\circ \text{ (ins >, \overset{\frown}{\text{---}})}$$



- Inscribed angles coming from the same arc are equal

Property # 3: Inscribed from Diameter

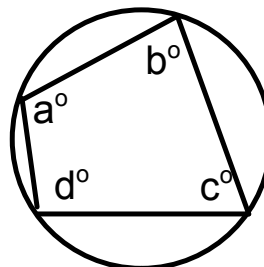
$$\angle \text{---} = \text{---}^\circ \text{ (ins >, \text{diam})}$$



- Inscribed angles coming from the diameter are 90°

Property # 4: Cyclic Quadrilateral

$$\angle \text{---} = \text{---}^\circ \text{ (CyQuad)}$$



- Opposite angles in a cyclic quad must add up to 180°

$$a^\circ + c^\circ = 180^\circ$$

$$b^\circ + d^\circ = 180^\circ$$



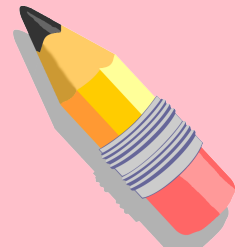
Homework:

TEST Tomorrow

p. 418 - 419

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- | | |
|---|----|
| 1 | 8 |
| 2 | 9 |
| 5 | 10 |
| 6 | |
| 7 | |



Practice Test page 420

1,2,3

Attachments

CSI Crime Scene Investigation.mp3

Worksheet - Angles in a Circle.doc