1.1 Angler Wednesday, Jan Pary 15, 2020 9:35 AM terminal ride ponitive angle (conterclockwise) Initial ride Vertex Initial ride regative angle (clockwire) Termina ride Degree Meanure. 360° \_ 360° 1800 Terminal Initial rick nide Initial ride Terminal ride -180

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Standard Pontion. Definition: An angle is in standard position if its vartex is at the origin and its initial ride lies on the positive Terminal ride The angle is said to lie in the quadrant in which its terminal ride I lies x-axin 3 T pontive, in quadrant I X Initial ride 5 Initial ride negative, in quadrant II

Type of cingle Meanne Between 0° and 90° Acute Exactly goo Right Between 90° and 180° Obture Exactly 180° Straight Complementary angles: two positive angle meanners that add up to 90°. E.g. 45° and 45°, 1° and 89°. Supplementary angles . two pointive angle measures that add up to 180° E.g. 90° and 90°; 179° and 1°.

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Quadrantal angles: is angle whose terminal rice lies on X-axin on y-axin Anda 90° Nida 90° Initial nice terminal ride Initial ride O° ongle 0 180° 270° initial Cotominal angle: coterminal ungles are angles that have the same initial ride and terminal ride but different amount of notation. Their meannes differ by a multiple of 360°

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30° and 390° are coterminal angles Janua . 3900 30 Initi. 30° and 750° are cotenninal angles Term. 750° - 30° = 2.360° 750° 30 Ð In. 30° and - 330° one coterminal 仚 Terma. - 330° - 30° - - 360° -330° 30 Ð Tu.

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\* We can find cotenninal angles by adding on subtracting a multiple of 360° from a given angle. ⊖: given angle The expression  $\Theta + n \cdot 360^{\circ}$  where n is any integer n=...,-3,-2,-1,1,2,3,... give an angle that is cotenninch with O Ex: Une the expression  $\theta$  + n. 360° to find (a) 2 positive angles a cotenninal with  $\theta = 135^{\circ}$ n=1:  $135^{\circ} + 1:360^{\circ} = 495^{\circ}$ ; n=2:  $135^{\circ} + 2:360^{\circ} = 855^{\circ}$ (b) 2 negative angles cotenning with  $\Theta = 135^{\circ}$ . n = -1:  $135^{\circ} - 1 \cdot 36^{\circ} = -225^{\circ}$  $n = -7: 135^{\circ} - 2.360^{\circ} = -585^{\circ}.$ Degrees, Minutes, Secondo  $4^{\circ} = 60^{\circ}$   $4^{\circ} = \left(\frac{1}{60}\right)^{\circ}$ 1 degrees = 60 minutes. Divide into 60 equel

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Degrees multiply by 60  
Degrees multiply by 
$$\frac{1}{60}$$
 Degrees  
1 minute = 60 seconds ;  $1 = 60^{\circ}$   
Minutes mult by 60 Seconds  
Seconds nult by  $\frac{1}{60}$  Seconds  
Seconds nult by  $\frac{1}{60}$  Minutes  
Degrees mult by  $\frac{1}{3600}$  Seconds  
Seconds nult by  $\frac{1}{3600}$  Degrees  
Celeveldions with Degrees, minutes and seconds.  
(a)  $28^{\circ}35^{\circ} + 63^{\circ}52^{\circ}$   
 $= 91^{\circ}87^{\circ} = 91^{\circ}$  and  $1^{\circ}$  and  $27^{\circ} = 92^{\circ}27^{\circ}$   
(b)  $180^{\circ} - 117^{\circ}29^{\circ} = 62^{\circ}31^{\circ}$ 

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Convert an angle measure to decimal degrees.  $105^{\circ} 20' 32'' = 105^{\circ} + \left(\frac{20}{60}\right)^{\circ} + \left(\frac{32}{260^{\circ}}\right)^{\circ}$ ~ 105.342 Convoit an angle from degrees to degrees, minutes, records 0.78<sup>)</sup> <u>mult</u>. 46.8<sup>°</sup> - 47<sup>°</sup> by 60