

PRACTICEcoterminalPredictSign

Kuta Software - Infinite Algebra 2

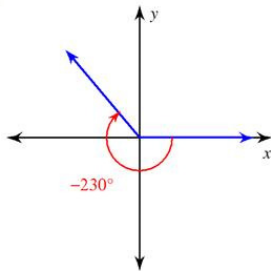
Name _____

Coterminal Angles and Reference Angles

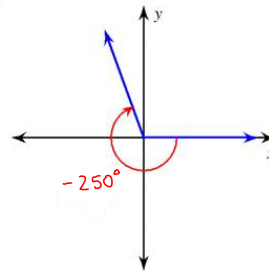
Date _____ Period _____

state a list of coterminal angles, pick out the principal one and name the related acute, or predict if sine/cosine/tangent will be + or -

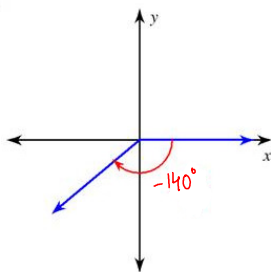
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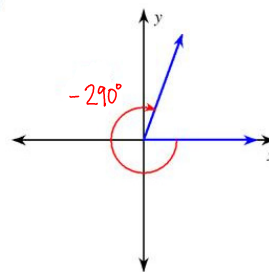
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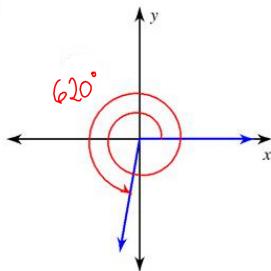
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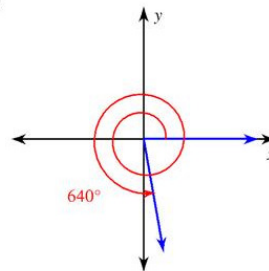
4)



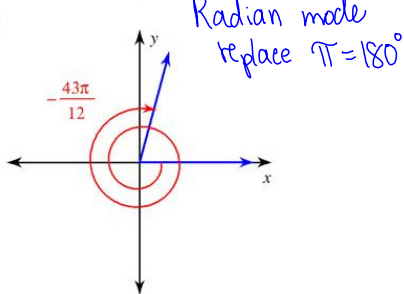
5)



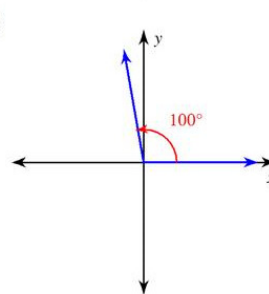
6)



7)



8)



9) -510°

10) -190°

11) -195°

12) -250°

13) 290°

14) $\frac{13\pi}{18}$ replace $\pi = 180^\circ$

Sketch the given angle

State the related acute angle

Find an equivalent expression that gives the same answer

25) $\cos 125^\circ$

26) $\tan 340^\circ$

27) $\sin 200^\circ$

28) $\sin(-230^\circ)$

Find at least two equivalent expressions for given ratios
(don't use the same concept twice)

29) $\sec(-230^\circ)$

30) $\cot(580^\circ)$

31) $\csc(260^\circ)$

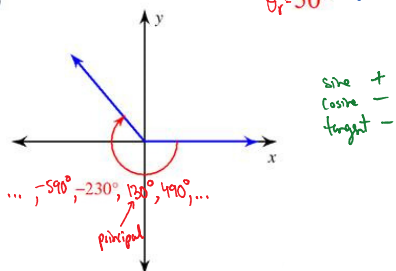
32) $\cos(75^\circ)$

Coterminal Angles and Reference Angles

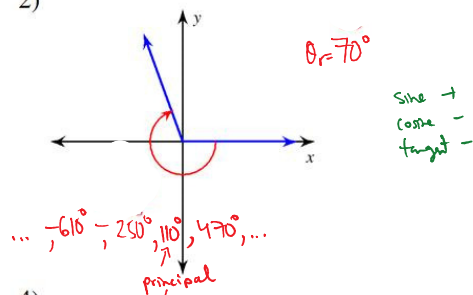
Date _____ Period _____

state a list of coterminal angles, pick out the principal one and name the related acute, or predict if sine/cosine/tangent will be + or -

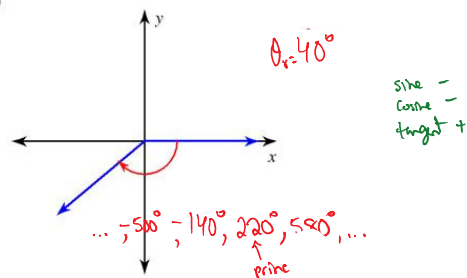
1)



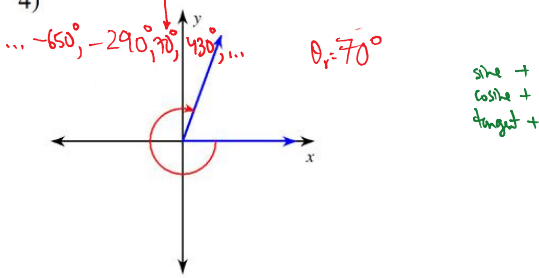
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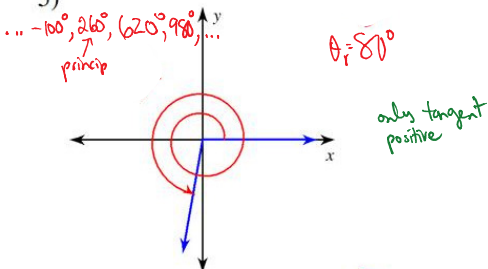
3)



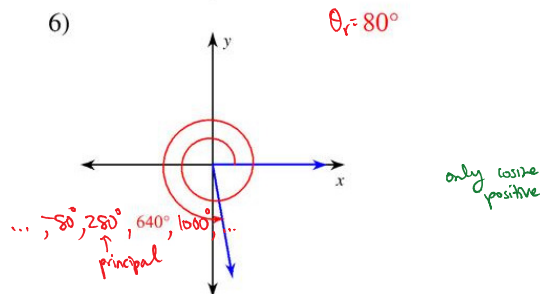
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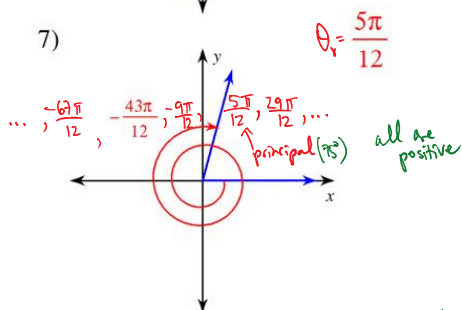
5)



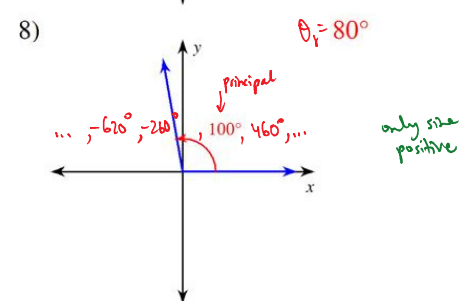
6)



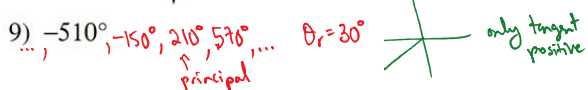
7)



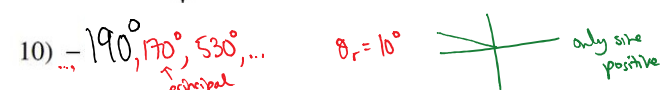
8)



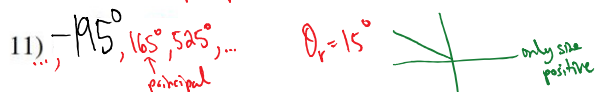
9)



10)



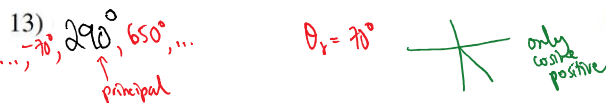
11)



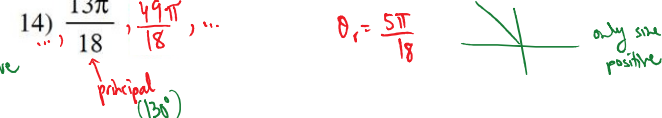
12)



13)



14)



Sketch the given angle

State the related acute angle

Find an equivalent expression that gives the same answer

25) $\cos 125^\circ$

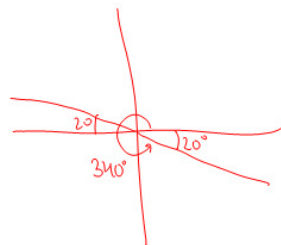


related acute = 55°

Cosine is negative in quad II and III

$\therefore \cos 125^\circ = \cos 235^\circ$

26) $\tan 340^\circ$

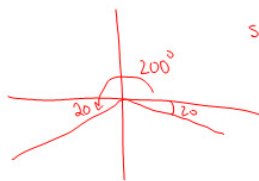


related acute = 20°

tangent is negative in quad II and IV

$\therefore \tan 340^\circ = \tan 160^\circ$

27) $\sin 200^\circ$

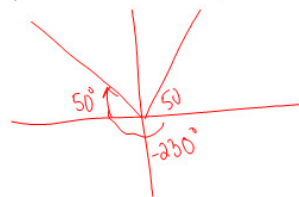


related acute = 20°

sine is negative in III and IV

$\therefore \sin 200^\circ = \sin 340^\circ$

28) $\sin(-230^\circ)$



related acute = 50°

sine is positive in quad II and I

$\sin(-230^\circ) = \sin 50^\circ$

Find at least two equivalent expressions for given ratios
(don't use the same concept twice)

29) $\sec(-230^\circ)$

$\sec(-230^\circ) = \sec(130^\circ)$
using coterminal angle

$\sec(-230^\circ) = \sec(230^\circ)$

secant same sign in II and III
by CAST

30) $\cot(580^\circ)$

$\cot(580^\circ) = \cot(220^\circ)$

using coterminal angle

$\cot(580^\circ) = \cot(40^\circ)$

cotangent same sign in III and I
by CAST

31) $\csc(260^\circ)$

$\csc(260^\circ) = \csc(60^\circ)$

using coterminal angle

$\csc(260^\circ) = \csc(280^\circ)$

cosecant same sign in III and IV
by CAST

32) $\cos(75^\circ)$

$\cos(75^\circ) = \cos(435^\circ)$

using coterminal angle

$\cos(75^\circ) = \cos(-75^\circ)$

cosine same sign in I and IV
by CAST