Warm-up:

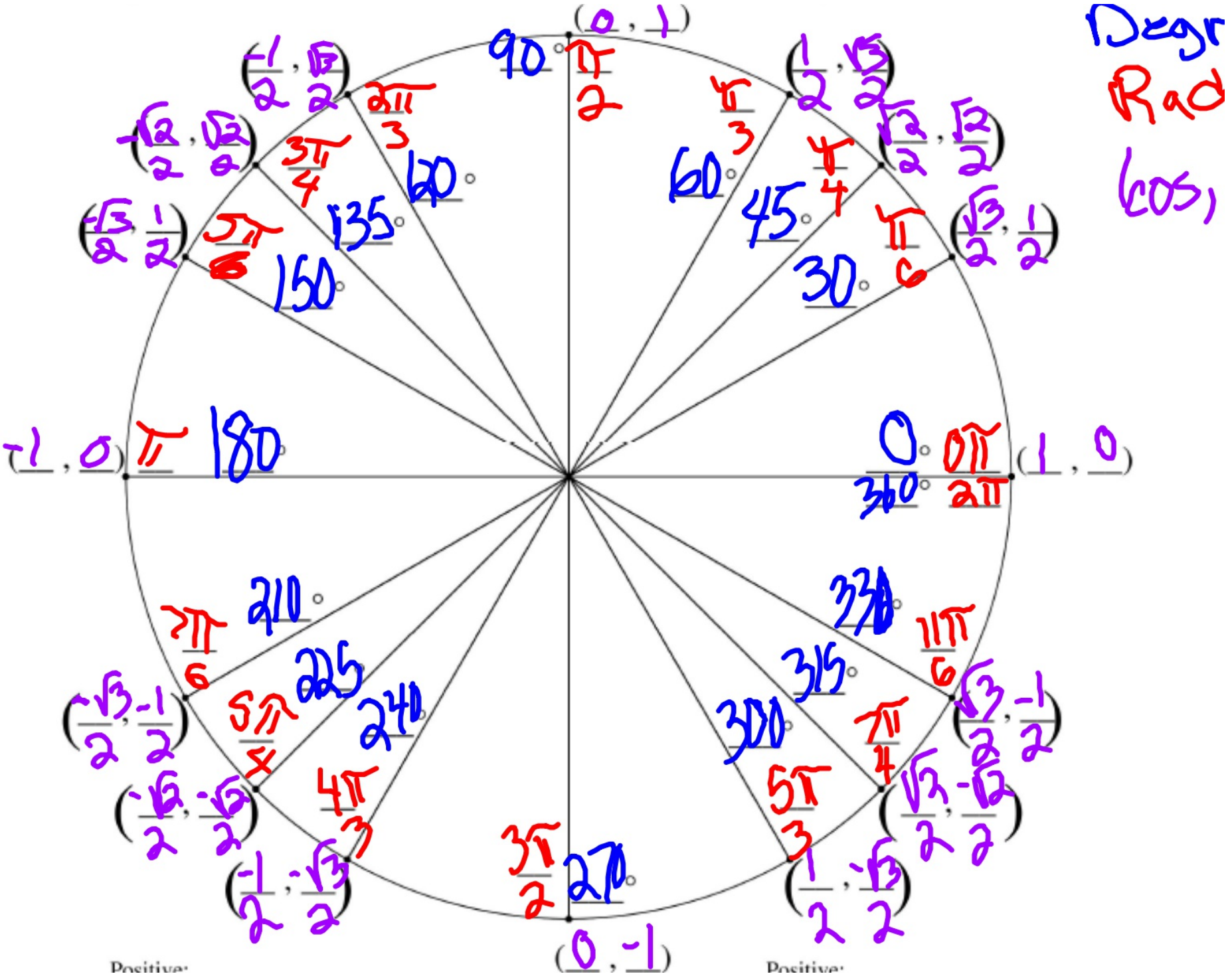
1) $\sin \pi/6 = \frac{1}{2}$

2) $\cos 180^\circ = -1$

3) $\sin 7\pi/6 = -\frac{1}{2}$

4) $\cos 5\pi/3 = -\frac{\sqrt{3}}{2}$

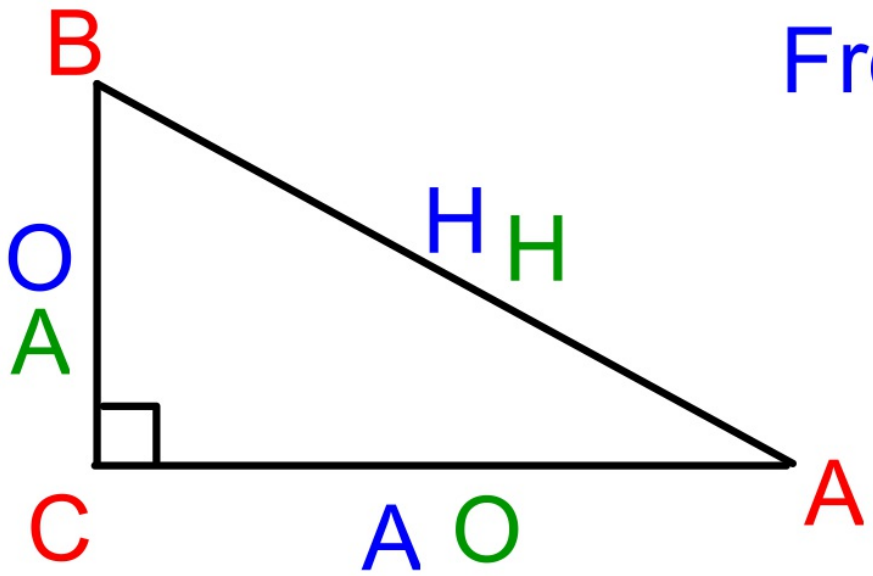
5) $\sin 30^\circ = \frac{1}{2}$


Degr
Rad
(cos,
(0, 1)
90°
π/2
(1/2, √3/2)
π/3
60°
(√2/2, √2/2)
π/4
45°
(√3/2, 1/2)
π/6
30°
(-1, 0)
π
180°
0°
0
360°
2π
(1, 0)
(-√3/2, -1/2)
7π/6
210°
(-√2/2, -√2/2)
5π/4
225°
(-1/2, -√3/2)
4π/3
240°
(0, -1)
3π/2
270°
(1/2, -√3/2)
5π/3
300°
(√3/2, -√2/2)
7π/4
315°
(√3/2, -1/2)
11π/6
330°
Positive:
Positive:

3.4

Right Angle Trigonometry

SOH CAH TOA



From ∠ A

From ∠ B

Trig Rules:

SOHCAHTOA

sin = O/H

cos= A/H

tan= O/A

csc= H/O

sec= H/A

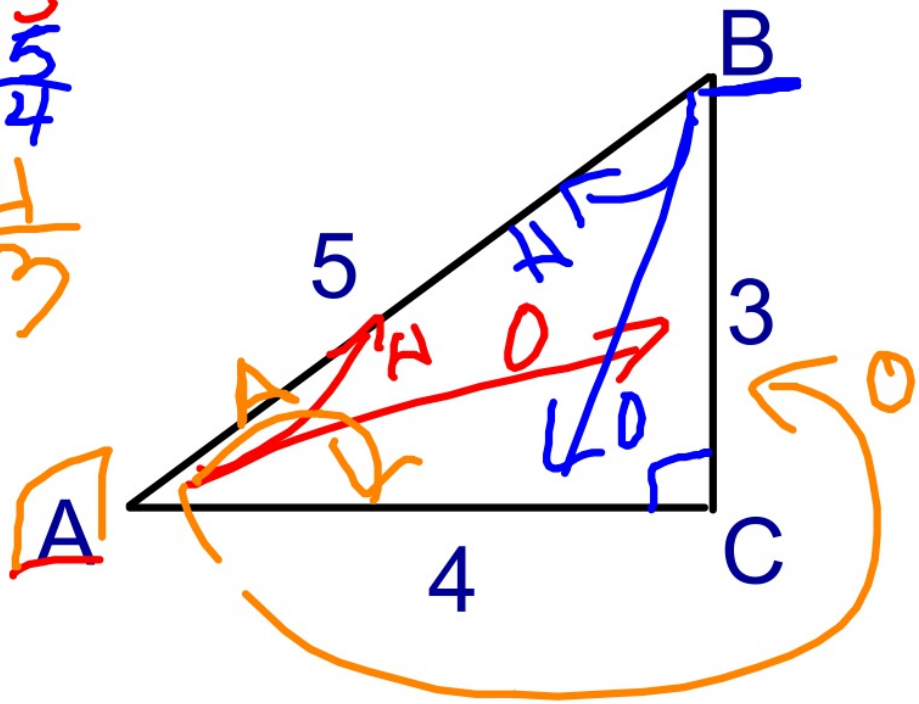
cot= A/O

Find the following:

1) $\sin A = \frac{O}{H} = \frac{3}{5}$

2) $\csc B = \frac{H}{O} = \frac{5}{4}$

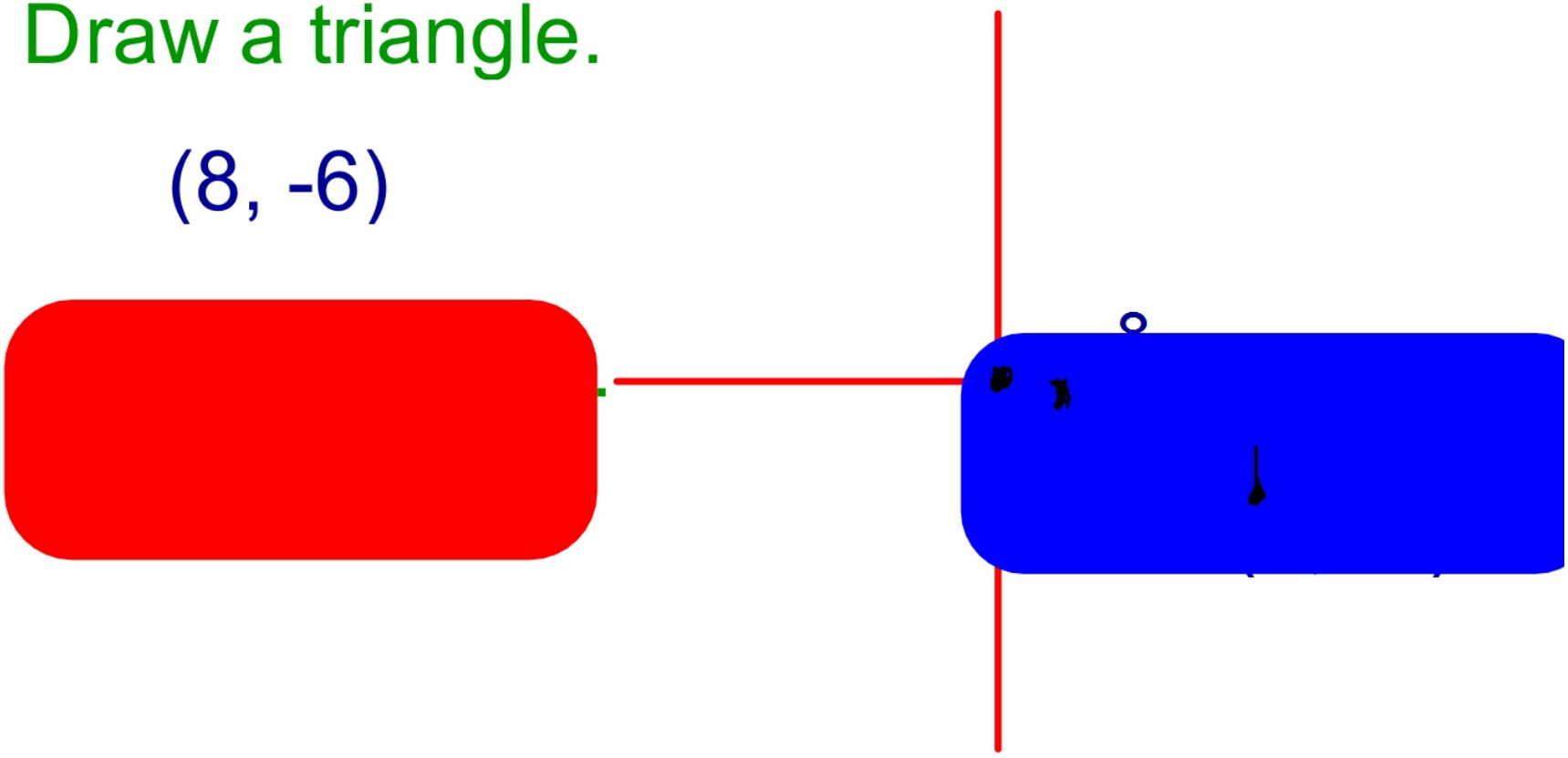
3) $\cot A = \frac{A}{O} = \frac{4}{3}$



Given a point, how do you determine the trig values?

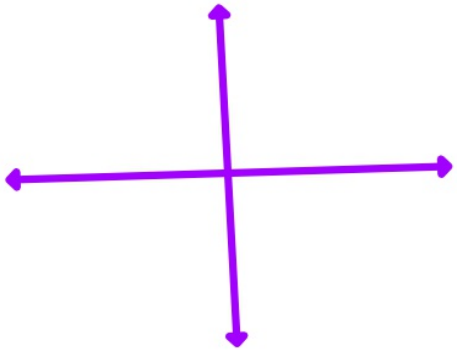
Draw a triangle.

(8, -6)

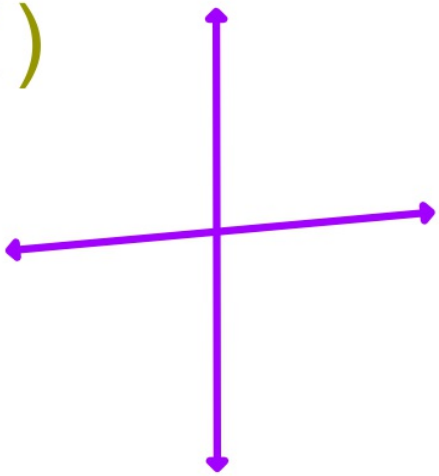


Given the following points, determine the six trig values.

1) (4, 3)



2) (-2, -1)



Find the exact value of each trigonometric function, if defined. If not defined, write *undefined*. (Example 2)

9. $\sin \frac{\pi}{2}$

10. $\tan 2\pi$

11. $\cot(-180°)$

12. $\csc 270°$

13. $\cos(-270°)$

15. $\tan \pi$

Find the exact value of each expression. (E

25. $\cos \frac{4\pi}{3}$

26. $\tan \frac{7\pi}{6}$

27. $\sin \frac{3\pi}{4}$

28. $\cot(-4$

29. $\csc 390°$

30. $\sec(-1$

31. $\tan \frac{11\pi}{6}$

32. $\sin 300$

Periodic Function

Periodic function is a function that repeats a pattern over and over at a certain interval.

Radian repeats every 2π for sin and cos and π for tan.
Degree repeats every 360º for sin and cos and 180º for tan.

Find the value of each expression.

1) cos $11\pi/4$

Determine the following values.

1) $\sin 13\pi/4$

2) $\tan 19\pi/6$

Practice

p.251 #2-8, 44-58 even

Warm-up
Take this survey

p://www.advanc-ed.org/survey/public/9976759