11.1 to 11.5 Quiz

Name _____
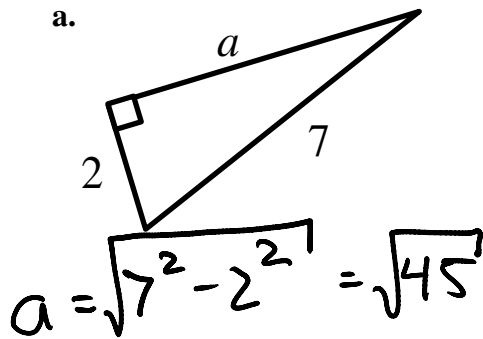
Date _____

No calculators. If the problem involves special angles, you need to write exact, simplified values. If it does not involve special angles, you may leave your answers with terms like $\sqrt{1-.66^2}$ or $\cos^{-1}(\frac{3}{7})$.
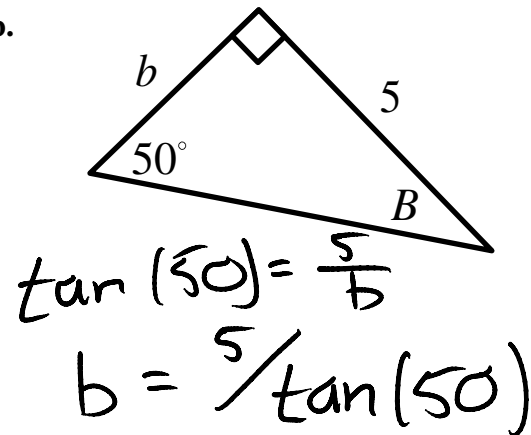
1. Find the missing length or angle.

a.

a

7

2

$a = \sqrt{7^2 - 2^2} = \sqrt{45}$

b.

b

5

$50°$

B

$B = 90 - 50 = 40$

$\tan(50) = \frac{5}{b}$

$b = \frac{5}{\tan(50)}$

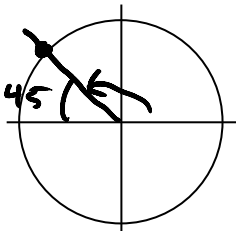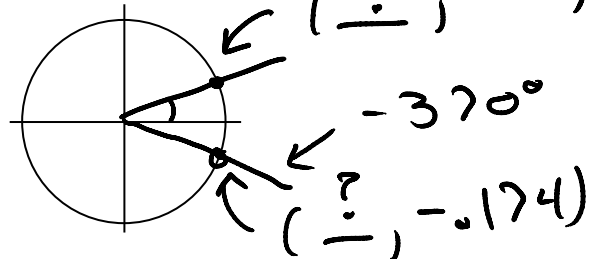**2.** Fill in the blanks with the appropriate values and make the relevant sketches on the unit circle diagrams. The values below may or may not be needed. If a question cannot be answered, explain why not.

$\cos(55°) = .574 \qquad \sin(72°) = .951 \qquad \sin(-370°) = -.174$

$\cos(50°) = .643 \qquad \tan(25°) = .466 \qquad \cos(170°) = -..985$

a. $\cos(135°) = \underline{-\frac{1}{\sqrt{2}}}$

45

b. $\sin(10°) = \underline{.174}$

$(\frac{?}{}, .174)$

$-370°$

$(\frac{?}{}, -.174)$

c. $\cos(162°) = \underline{-.951}$

.951

.951

d. $\tan(65°) = \frac{a}{b} = \frac{1}{.466}$

(b,a)

(a,b) at $25°$

a

b

$\Rightarrow \frac{b}{a} = \tan(25)$
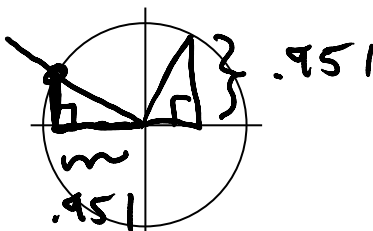
$= .466$
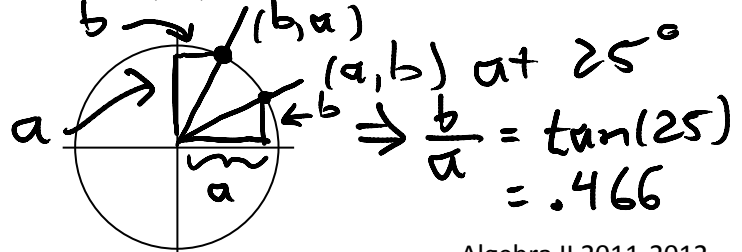
3. Use the information given in the diagram OR other things you know to find the indicated values.

.985

(.84, .54)
at 33°

(d, e)
at 100

(a, b)
at 15°

(−.97, −.26)
at 195°

(55, .819)

(330, f)

sin(330)

(33, c)

(−170, .985)

−.985
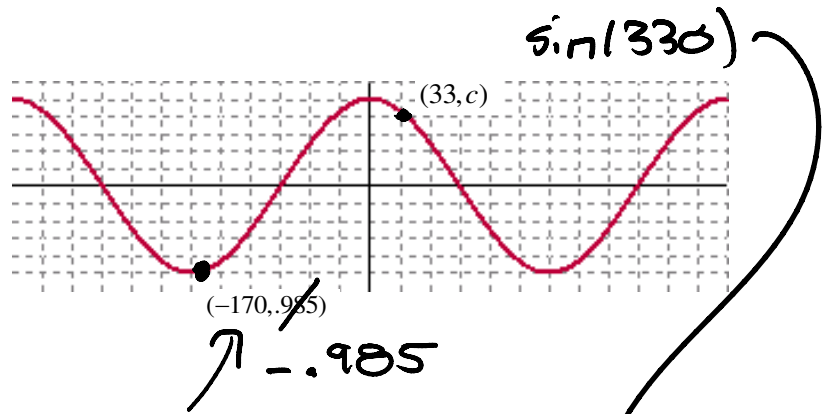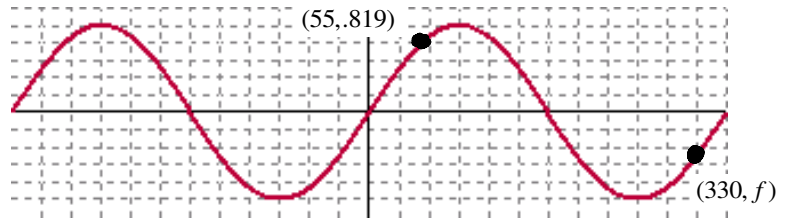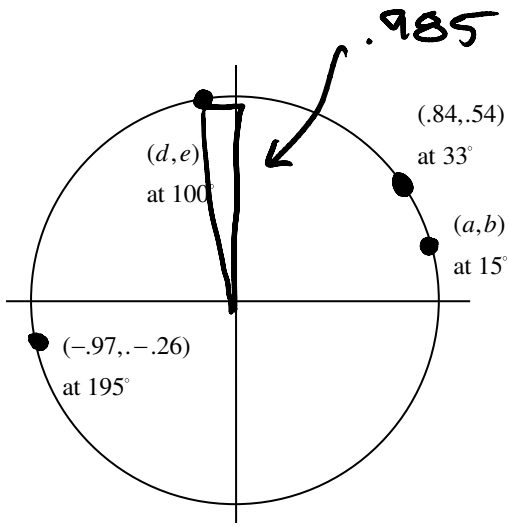
$a = \underline{.97}$

$b = \underline{.26}$

$c = \underline{.84}$

$d = \underline{\sqrt{1 - .985^2}}$

$e = \underline{.985}$

$f = \underline{-\frac{1}{2}}$

.985

$\left(\frac{\sqrt{3}}{2}, -\frac{1}{2}\right)$