

Homework grades this week:

01: Read sections 5.3 and 5.4 in your textbook (and 5.2 if you haven't already) by Monday 22 Aug.

02: Complete at least 45 minutes of exercises on **Khan Academy** related to sections 5.2, 5.3, and 5.4 by Friday, 26 Aug; in addition, complete "Mastery Challenges" as often as they become available to you.

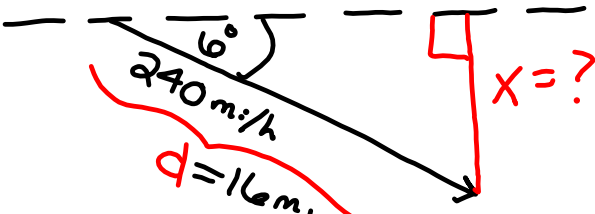
03: **Textbook problems**, mostly be completed in class and due Friday, 26 Aug.

- 5.2: #1-6 all; 15-41 odd; 59-75 odd (NO CALCULATOR!)
- 5.3: #1-35 odd; 37-48 all (NO CALCULATOR!); 61-68 all (NO CALCULATOR!)
- 5.4: #13-22 all (NO CALCULATOR!)

Test #1 - Next week! Fri, 9/2

Expect another quiz before the test.

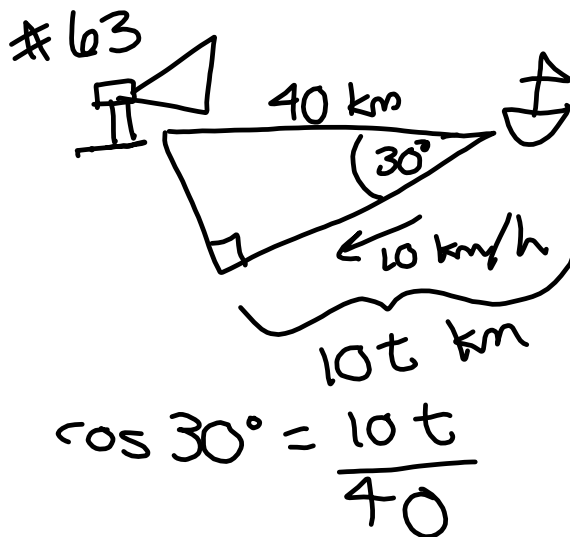
5.2
#67 airplane traveling 240 mph
angle of depression 6°
how many miles will plane descend in 4 min?



$$\sin 6^\circ = \frac{x}{16}$$

$$x = 16 \sin 6^\circ \approx \quad \text{mi}$$

$$d = \frac{240 \text{ mi}}{\cancel{h}} \cdot \frac{4 \cancel{\text{ min}}}{1} \cdot \frac{1 \cancel{h}}{60 \cancel{\text{ min}}} = 16 \text{ mi}$$



$$10t = 40 \cos 30^\circ$$

$$t = \frac{40 \cos 30^\circ}{10}$$

$$= 4 \cdot \frac{\sqrt{3}}{2}$$

$$t = 2\sqrt{3} \text{ hours past } 1:00$$

Khan Academy exercises for section 5.1:

[arc measure](#)



[arc length](#)



[radians & degrees](#)



[radians & arc length](#)



[complementary & supplementary angles](#)



[multiple units word problems](#)



[convert units \(metrics\)](#)



[convert units word problems \(metrics\)](#)



[convert units \(US customary\)](#)



[convert units word problems \(US customary\)](#)



Khan Academy exercises for section 5.2:

- Trigonometric ratios in right triangles
- Solve for a side in right triangles
- Solve for an angle in right triangles
- Right triangle word problems

Khan Academy exercises for section 5.3-5.4:

- Trig values of special angles
- Use the Pythagorean identity

$$\cot \frac{3\pi}{4} =$$

$$\boxed{-1}$$

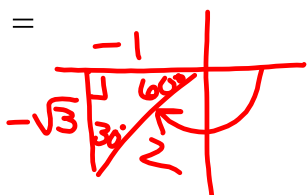


$$\sec \frac{7\pi}{4} =$$

$$\sqrt{2}$$

$$\csc \left(-\frac{2\pi}{3} \right) =$$

$$\boxed{-\frac{2}{\sqrt{3}}}$$



$$\csc \frac{3\pi}{2} =$$

$$-1$$

$$\sin \frac{4\pi}{3} =$$

$$-\frac{\sqrt{3}}{2}$$


$$\tan \frac{7\pi}{6} =$$

$$\frac{1}{\sqrt{3}}$$

Evaluate the following:

1. $\sin 135^\circ$

4. $\cot(-450^\circ) = \cot(-90^\circ)$
0

$\cot = \frac{\text{adj}}{\text{opp}}$ $-450 + 360 = -90$ $\frac{0}{\sin}$
 $\frac{0}{-1} = 0$

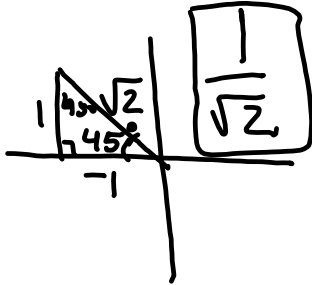
2. $\tan \frac{11\pi}{6}$

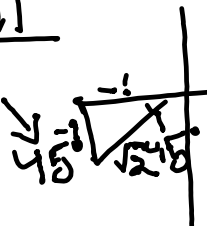
5. $\cos \frac{2\pi}{3}$

3. $\csc \frac{5\pi}{4}$

6. $\cos 53\pi$

1.



$\frac{3.5\pi}{4}$
 $-\frac{\sqrt{2}}{1} = -\sqrt{2}$