Unit 5 Day 12

Some Review

And Quiz #2

Warm-up

Solve the trig equations:

1) $1 + \cos(x) = 0$ 　　　　　　2) $2\sin(x)\cos(x) + \cos(x) = 0$

3) $2\tan(x)\sin(x) = 2\tan(x)$

4) Find the area of the triangle if $b = 11$, $a = 8$, and Angle $C = 37$.
Round to the nearest hundredth.

5) Solve the triangle in problem #4. Round to the nearest tenth.

6) Solve the problem. Round answer(s) to the nearest degree
   a. $2\sin(x)\cos(x) = -\sqrt{2}\sin(x)$ 　　　　b. $2\cos(5x) = \sqrt{3}$

7) Angles F and G are complementary angles. As the measure of angle F changes by a set amount, $\sin(F)$ increases by 0.3. How does $\cos(G)$ change?

    A.　It increases by a greater amount.

    B.　It increases by the same amount.

    C.　It increases by a lesser amount.

    D.　It does not change.

Warm-up Answers

Solve the trig equations:

1) $1 + \cos(x) = 0$ 2.) $2\sin(x)\cos(x) + \cos(x) = 0$

x = 180⁰

x = 90⁰, -30⁰

3) $2\tan(x)\sin(x) = 2\tan(x)$

x = 0 °, 90°

4) Find the area of the triangle if b = 11, a = 8, and Angle C = 37.
Round to the nearest hundredth.   **26.48 units squared**

5) Solve the triangle in problem #4. Round to the nearest tenth.

Angle A = 46.2⁰   Angle B = 96.8⁰   c= 6.7

6) Solve the problem. Round answer(s) to the nearest degree

   a. $2\sin(x)\cos(x) = -\sqrt{2}\sin(x)$ **0°, 135°**

   b. $-2\cos(5x) = \sqrt{3}$ **30°**

Warm-up Answers

7) Angles F and G are complementary angles. As the measure of angle F changes by a set amount, sin(F) increases by 0.3. How does cos(G) change?

      A. It increases by a greater amount.

      B. It increases by the same amount.

      C. It increases by a lesser amount.

      D. It does not change.

Remember that if F and G are complementary angles, sin(F) = cos(G)   example: cos(30) = sin(60)

If angle F changes and the makes sin(F) increase, Angle F and G would still be complementary so sin(F) = cos(G) would still be true. Therefore, cos(G) would increase by 0.3 if that's how much sin(F) increased.

Homework Answers

Pg. 19
1. x = 30°
2. x = 30°
3. x = -90°
4. x = 90° or 30°
5. x = 45°
6. x = 60°
7. x = 0°,90°,-45°
8. x = 90°, 120°

Pg. 20
1. x = 20°
2. x = 0°, 180°
3. x = 0°
4. x = -7.5°
5. x = 30°
6. x = 30°, -30°
7. x = -60°
8. x = -120°

Tonight's Homework

- Packet p. 17-18
- Packet p. 25-26

Review & Practice

- Notes p. 32

Practice

An architect commissions a contractor to produce a triangular window. The architect describes the window as triangle ABC where m<A = 50, BC = 10 inches, and AB = 12 inches.

Find the missing measures of the window.
Round sides to the tenths place and angles to the nearest degree.

m<C = 67, m<B = 63, b = 11.6

OR

m<C = 113, m<B = 17, b = 3.8