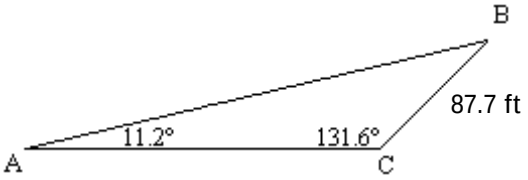
1316 - Final Review - Calculator Part

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

Solve the triangle. Round to the nearest tenth when necessary or to the nearest minute as appropriate.

1) 1) _____



A) B = 36.8°, b = 270.5 ft, c = 337.6 ft
B) B = 37.2°, b = 337.6 ft, c = 273 ft
C) B = 37.2°, b = 28.2 ft, c = 22.9 ft
D) B = 37.2°, b = 273 ft, c = 337.6 ft

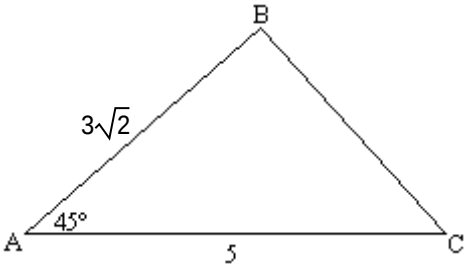
Find the area of triangle ABC with the given parts. Round to the nearest tenth when necessary.

2) A = 27°10' 2) _____
b = 19.9 m
c = 10.2 m

A) 23.2 m^2 B) 94.6 m^2 C) 46.3 m^2 D) 92.6 m^2

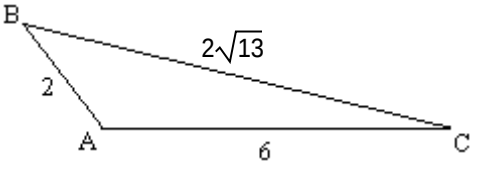
Find the indicated angle or side. Give an exact answer.

3) Find the exact length of side a. 3) _____



A) $\sqrt{61}$ B) $\sqrt{13}$ C) 1 D) $\sqrt{73}$

4) Find the measure of angle A in degrees. 4) _____



A) 120° B) 60° C) 140° D) 135°

Find the area of triangle ABC with the given parts. Round to the nearest tenth when necessary.

5) a = 41 ft 5) _____
b = 58 ft
c = 63 ft

A) 129 ft^2 B) 1158 ft^2 C) 1448 ft^2 D) 1737 ft^2

Solve the equation in the interval [0°, 360°). Give solutions to the nearest tenth, if necessary.

6) $2\cos^3\theta = \cos\theta$ 6) _____

A) {45°, 135°, 225°, 315°} B) $\emptyset$

C) {45°, 90°, 135°, 225°, 270°, 315°} D) {90°, 270°}

7) $\sin 2\theta = -\sin\theta$ 7) _____

A) {60°, 120°, 240°, 300°} B) {0°, 180°}

C) {0°, 120°, 180°, 240°} D) {0°, 60°, 120°, 180°, 240°, 300°}

Give the exact value of the expression.

8) $\cos\left(\arcsin\frac{3}{5} + \arccos\frac{\sqrt{3}}{2}\right)$ 8) _____

A) $\frac{4\sqrt{3}-3}{10}$ B) $\frac{-25\sqrt{3}-48}{100}$ C) $\frac{2\sqrt{3}+2}{5}$ D) $\frac{4\sqrt{3}+3}{10}$

Determine all solutions of the equation in radians.

9) Find $\sin\frac{\theta}{2}$, given that $\sin\theta = -\frac{3}{5}$ and θ terminates in $270° < \theta < 360°$. 9) _____

A) $-\frac{\sqrt{5}}{5}$ B) $-\frac{\sqrt{30}}{10}$ C) $\frac{\sqrt{10}}{10}$ D) $\frac{\sqrt{5}}{5}$

Use an identity to write the expression as a single trigonometric function or as a single number.

10) $4\sin 2x\cos 2x$ 10) _____

A) $\cos 8x$ B) $\cos 4x$ C) $\frac{1}{2}\sin 16x$ D) $2\sin 4x$

Use identities to find the indicated value for each angle measure.

11) $\cos\theta = -\frac{5}{13}$, $\frac{\pi}{2} < \theta < \pi$ Find $\cos(2\theta)$. 11) _____

A) $\frac{120}{169}$ B) $\frac{119}{169}$ C) $-\frac{119}{169}$ D) $-\frac{120}{169}$

Find the exact value of the expression using the provided information.

12) Find $\sin(s - t)$ given that $\sin s = -\frac{1}{2}$, with s in quadrant IV, and $\sin t = \frac{1}{4}$, with t in quadrant II. 12) _____

A) $\frac{\sqrt{15}-\sqrt{3}}{8}$ B) $\frac{\sqrt{15}+\sqrt{3}}{8}$ C) $\frac{-\sqrt{15}-\sqrt{3}}{8}$ D) $\frac{-\sqrt{15}+\sqrt{3}}{8}$

Use identities to write each expression as a function of θ.

13) $\cos(\theta - \pi)$ 13) _____

A) $\cos\theta$ B) $\sin\theta$ C) $-\sin\theta$ D) $-\cos\theta$

Complete the sentence so the result is an identity. Let x be any real number.

14) ___ $+ \tan^2 x = \sec^2 x$ 14) _____

A) $\cos^2 x$ B) 1 C) $\sin^2 x$ D) -1

Use the fundamental identities to simplify the expression.

15) $\frac{1}{\cot^2\theta} + \sec\theta\cos\theta$ 15) _____

A) $\csc^2\theta$ B) 1 C) $\tan^2\theta$ D) $\sec^2\theta$

Answer Key
Testname: 1316-FINALREVIEW-CALCULATORPART

1) D
2) C
3) B
4) A
5) B
6) C
7) C
8) A
9) C
10) D
11) C
12) A
13) D
14) B
15) D