

## Bonus Assignment #2

Date \_\_\_\_\_

**From Assignment #5: Simplify each expression.**

1)  $\frac{\frac{16}{9}}{\frac{x^2}{16}}$

2)  $\frac{\frac{3}{a+2} + \frac{1}{3}}{\frac{3}{a+2}}$

**From Assignment #5: Simplify each and state the excluded values.**

3)  $\frac{n+10}{5n-10} \cdot \frac{10n^2+25n-90}{2n^2+27n+81}$

**From Assignment #5: Identify the domain and range of each.**

4)  $y = \frac{3}{5}\sqrt{x+6} - 4$

**From Assignment #5: Solve each equation. Remember to check for extraneous solutions.**

5)  $\sqrt{3k+20} = \sqrt{-5-2k}$

6)  $\frac{2}{r+4} = \frac{5r+5}{r^2+3r-4} + \frac{r-6}{r^2+3r-4}$

**From Assignment #5: Solve each equation.**

7)  $-5 + x^{\frac{3}{2}} = 338$

**From Assignment #5: Simplify.**

8)  $\frac{\sqrt{12}}{\sqrt{4}}$

9)  $\frac{-2 + \sqrt{5}}{\sqrt{4}}$

10)  $\frac{5}{3+4\sqrt{3}}$

**From Assignment #6: Solve each equation.**

11)  $\left(\frac{1}{125}\right)^{3b} = 625^{3b}$

12)  $216^{-2x-3} \cdot 216^{3x-1} = 6^2$

**Honors and VT only. From Assignment #6: Solve each equation. Round your answers to the nearest ten-thousandth.**

13)  $7 \cdot 14^{m-10} = 75$

14)  $2^{p+3} = 67$

**Honors and VT only. From Assignment #6: Solve each equation.**

15)  $\log_{20} 2x = \log_{20} (x+2)$

16)  $\log_{15} (3k^2 + 18k) = \log_{15} (-80 + 2k^2)$

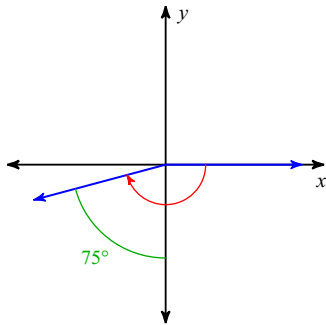
17)  $\log_4 (a+3) - 10 = -9$

**From Assignment #7 State the quadrant in which the terminal side of each angle lies.**

18)  $-640^\circ$

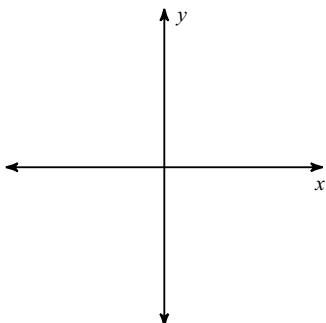
**Find the measure of each angle.**

19)



**Draw an angle with the given measure in standard position.**

20)  $-65^\circ$



**Find the reference angle.**

21)  $470^\circ$

**Honors and VT only. From Assignment #7: Find a positive and a negative coterminal angle for each given angle.**

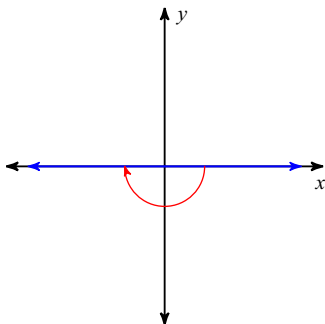
22)  $\frac{17\pi}{12}$

**Honors and VT only. From Assignment #7: State the quadrant in which the terminal side of each angle lies.**

23)  $\frac{19\pi}{6}$

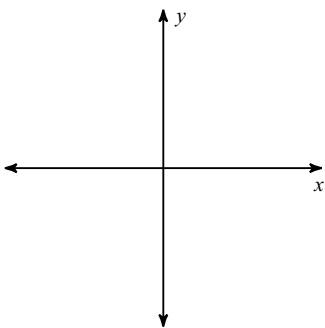
**Honors and VT only. From Assignment #7: Find the measure of each angle.**

24)



**Honors and VT only. From Assignment #7: Draw an angle with the given measure in standard position.**

25)  $-\frac{15\pi}{4}$



**Honors and VT only. From Assignment #7: Find the reference angle.**

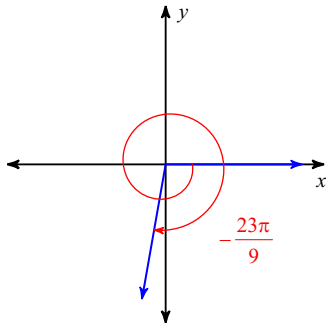
26)  $\frac{34\pi}{9}$

Honors and VT only. From Assignment #7: Convert each degree measure into radians and each radian measure into degrees.

27)  $\frac{11\pi}{6}$

Honors and VT only. From Assignment #7: Find the reference angle.

28)



#37) Honors and VT only. #38) ALL

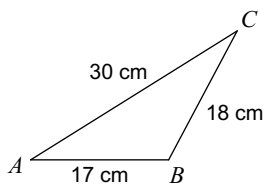
From Assignment #8: Find the exact value of each trigonometric function WITHOUT CALCULATORS.

29)  $\cot -330^\circ$

30)  $\sec \frac{2\pi}{3}$

From Assignment #8: Solve each triangle using law of sines or cosines. Round your answers to the nearest tenth.

31)



From Assignment #8: State the number of possible triangles that can be formed using the given measurements.

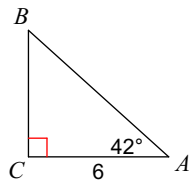
32) In  $\triangle EFD$ ,  $m\angle E = 91^\circ$ ,  $d = 14$  cm,  $e = 28$  cm

**From Assignment #8: Law of Sines & Cosines: Solve each triangle. Round your answers to the nearest tenth.**

33) In  $\triangle RST$ ,  $m\angle S = 16^\circ$ ,  $m\angle T = 46^\circ$ ,  $r = 16$  ft

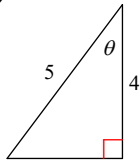
**From Assignment #8: Solve each triangle using SOHCAHTOA. Round answers to the nearest tenth.**

34)



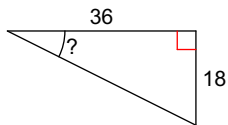
**From Assignment #8: Find the value of the trig function indicated.**

35)  $\cos \theta$



**From Assignment #8: Find the measure of the indicated angle to the nearest degree.**

36)



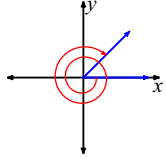
## Answers to Bonus Assignment #2 (ID: 1)

1)  $\frac{256}{9x^2}$

9)  $\frac{-2 + \sqrt{5}}{2}$

17)  $\{1\}$

25)



31)  $m\angle C = 30^\circ, m\angle A = 32^\circ, m\angle B = 118^\circ$

35)  $\frac{4}{5}$

3)  $\frac{n+10}{n+9}; \left\{2, -9, -\frac{9}{2}\right\}$

11)  $\{0\}$

19)  $-165^\circ$

27)  $330^\circ$

5)  $\{-5\}$

13) 10.8986

21)  $70^\circ$

29)  $\sqrt{3}$

7)  $\{49\}$

15)  $\{2\}$

23) III

33)  $m\angle R = 118^\circ, t = 13 \text{ ft}, s = 5 \text{ ft}$