Precalculus AB    Name_____    ID: 1
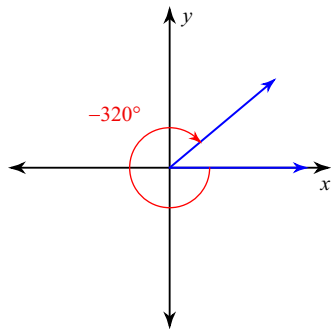
# Summer Assignment

Date_____  Period____

**Find a positive and a negative coterminal angle for each given angle.**
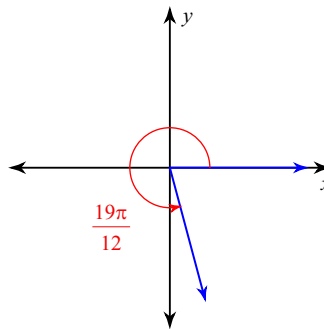
1) $-\dfrac{5\pi}{9}$

2) $\dfrac{19\pi}{45}$

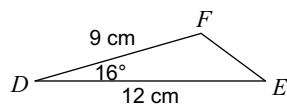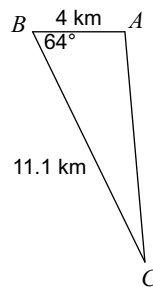**Find the reference angle.**

3)



4)



**Find the area of each triangle to the nearest tenth.**

5)



6)



**Determine if the sequence is arithmetic. If it is, find the term named in the problem, the explicit formula, and the recursive formula.**

7) 32, −168, −368, −568, ...
   Find $a_{40}$

8) −21, −26, −31, −36, ...
   Find $a_{33}$

**Evaluate each arithmetic series described.**

9) $\displaystyle\sum_{n=1}^{35}\left(\dfrac{1}{3}+\dfrac{5}{3}n\right)$

10) $\displaystyle\sum_{k=1}^{45}\left(9k-18\right)$
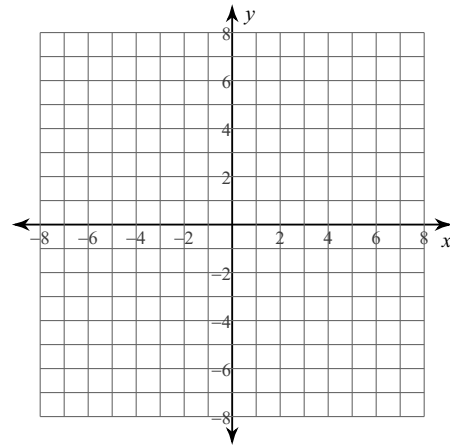
**Expand completely.**

11) $\left(y-2x\right)^{5}$

**Classify each conic section, write its equation in standard form, and sketch its graph.**

12) $x^2 + y^2 + 2x + 6y + 2 = 0$
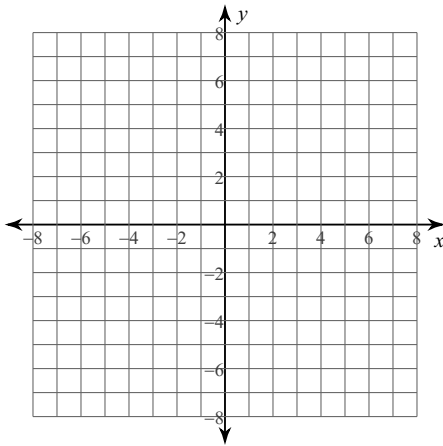
13) $-x^2 - 6x + y - 8 = 0$

**State the number of complex zeros, the possible number of real and imaginary zeros, and the possible rational zeros for each function. Then find all zeros.**

14) $f(x) = x^3 + 5x^2 - 13x + 7$

15) $f(x) = x^3 + 27$

**Determine if the sequence is geometric. If it is, find the common ratio, the term named in the problem, the explicit formula, and the recursive formula.**

16) $-1,\ 3,\ -9,\ 27, ...$
   Find $a_{11}$

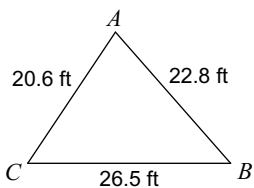17) $4,\ -12,\ 36,\ -108, ...$
   Find $a_{11}$

**Evaluate each geometric series described.**

18) $\sum_{k=1}^{8} -3 \cdot 2^{k-1}$
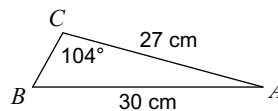
19) $\sum_{n=1}^{8} 0.2 \cdot (-5)^{n-1}$

**Solve each triangle. Round your answers to the nearest tenth.**

20)

A triangle with vertices A (top), C (bottom left), B (bottom right). Side from A to C is 20.6 ft, side from A to B is 22.8 ft, side from C to B is 26.5 ft.

21)

A triangle with vertex C (top left), B (bottom left), A (right). Angle at C is $104°$, side from C to A is 27 cm, side from B to A is 30 cm.

**Find the exact value of each trigonometric function.**

22) $\sec 405°$

23) $\sin -360°$

**Solve each equation. Round your answers to the nearest ten-thousandth.**

24) $1.7 \cdot 6^{-1.7v} - 6 = 8$

**Simplify.**

25) $\dfrac{\sqrt{2n}}{4\sqrt{n^3} - 4}$