Algebra 2 Name_____

PR1 Exam DO NOT WRITE ON EXAM Date_____ Period____

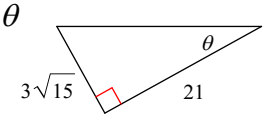
State the quadrant in which the terminal side of each angle lies.

1) $-\frac{11\pi}{3}$

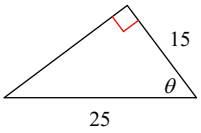
2) $-\frac{17\pi}{6}$

Find the value of the trig function indicated.

3) tan θ



4) sin θ



Find a coterminal angle between 0° and 360°.

5) $-255°$

6) $670°$

Perform the indicated operation.

7) $g(x) = x - 2$
$h(x) = x^2 + 1$
Find $\left(\frac{g}{h}\right)(6)$

8) $h(x) = 2x + 5$
$g(x) = 3x - 2$
Find $(h \cdot g)(-6)$

9) $f(n) = n^2 + 4n$
$g(n) = 4n - 2$
Find $(5f - 3g)(2)$

10) $g(t) = t - 4$
Find $(g \circ g)(-5)$

Find the common difference, the 52nd term, and the explicit formula.

11) 39, 33, 27, 21, ...

12) −38, 62, 162, 262, ...

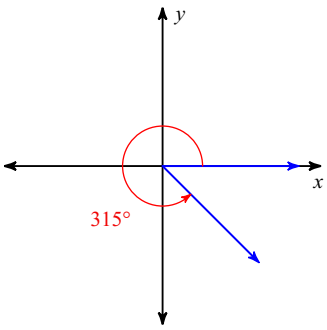
Evaluate each arithmetic series described.

13) $(-11) + (-16) + (-21) + (-26)..., \ n = 15$

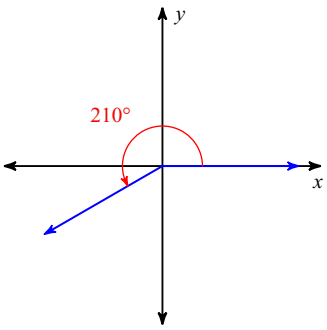
14) $(-2) + 0 + 2 + 4..., \ n = 8$

Find the exact value of each trigonometric function.

15) cos θ



16) sin θ



Graph each function using radians for $(0, 2\pi)$.

17) $y = 2\cos\theta$

18) $y = \frac{1}{2} \cdot \cos\theta$

19) $y = \frac{1}{2} \cdot \sin\theta$

20) $y = 2\sin\theta$

Find the common ratio, the 8th term, and the explicit formula.

21) 1, −3, 9, −27, ...

22) 2, 4, 8, 16, ...

Evaluate each geometric series described.

23) $-4 - 8 - 16 - 32..., \ n = 9$

24) $-1 + 4 - 16 + 64..., \ n = 6$

Answers to PR1 Exam

DO NOT WRITE ON EXAM

1) I

2) III

3) $\frac{\sqrt{15}}{7}$

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

5) 105°

6) 310°

7) $\frac{4}{37}$

8) 140

9) 42

10) −13

11) Common Difference: $d = -6$
$a_{52} = -267$
Explicit: $a_n = 45 - 6n$

12) Common Difference: $d = 100$
$a_{52} = 5062$
Explicit: $a_n = -138 + 100n$

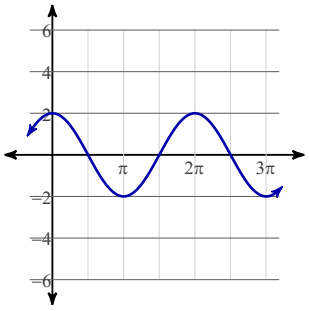
13) −690

14) 40

15) $\frac{\sqrt{2}}{2}$

16) $-\frac{1}{2}$

17)



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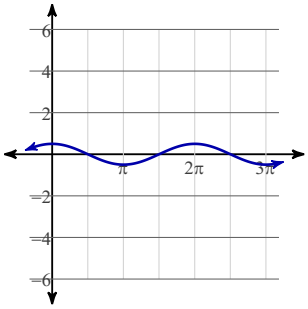

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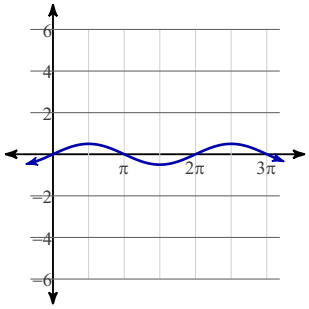
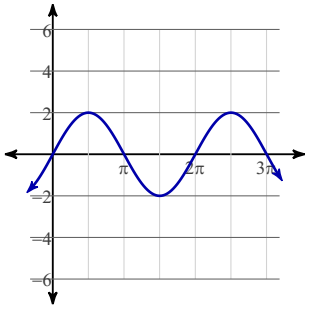


20)



21) Common Ratio: $r = -3$
$a_8 = -2187$
Explicit: $a_n = (-3)^{n-1}$

22) Common Ratio: $r = 2$
$a_8 = 256$
Explicit: $a_n = 2 \cdot 2^{n-1}$

23) −2044

24) 819