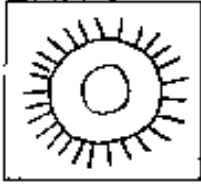# Precalculus Droodle Review Sheet

Directions: Solve each of the problems below and write the appropriate letter in the blank beside each problem. Then fill in the corresponding letter for each blank to determine the correct title of the droodle.

You probably thought the title to the droodle above was "A circular centipede under a beach umbrella," or maybe "A bagel wearing false eyelashes." But the real title is:

$\overline{16}$ $\overline{18}$ $\overline{2}$ $\overline{8}$ $\overline{14}$ $\overline{17}$ $\overline{20}$ $\overline{7}$ $\overline{11}$ $\overline{12}$ $\overline{18}$

$\overline{3}$ $\overline{1}$ $\overline{12}$ $\overline{12}$ $\overline{9}$ $\overline{15}$

_____ 1. Determine the domain of $y = \sqrt{x-3}$

_____ 2. Determine the slope of $y = 2x^2 - 4x + 2$

_____ 3. Determine the distance AB, given the coordinates A(-1, 1) and B(2, 3)

_____ 4. Graph $|x| > 1$

_____ 5. Describe the domain $|x - 1| < 3$ without using absolute value signs

_____ 6. Determine the equation of the line through (2, 1) and (2, -5)

_____ 7. Determine the equation of the line through (1, 4) and having an angle of inclination = 45 degrees

ANSWERS

?   (-9, -1)

A   -1

A

B

C

D

E

H $x \geq 3$

I $|x - 2| < 5$

I $\dfrac{\pi}{3}$

K   144

L $3x + 2$

N   (5, 0)

O $y = x + 3$

O $-2 < x < 4$

O $4x - 4$

P $6x$

S   1

_____ 8. A particle is moving along the parabola $y = x^2$ T $x^2 - 1$

              from (-1, 1) to (x, y). Determine $\dfrac{\Delta y}{\Delta x}$ in terms   U $x - 1$

              of x   W $\sqrt{13}$

_____ 9. If f(x) = x + 2 and g(x) = 3x, find f(g(x))   Y   None of the above

_____ 10. Use absolute value symbols to describe the domain $-3 < x < 7$

_____ 11. Convert $\dfrac{4\pi}{5}$ radians to degrees

_____ 12. Graph $|x| \le 1$

_____ 13. Convert 60 degrees to radians

_____ 14. If $f(x) = x^2$ and $g(x) = x - 1$, find $g(f(x))$

_____ 15. With respect to the x-axis, (-9, 1) is symmetric to …

_____ 16. Determine the slope of a line whose angle of inclination is 135 degrees

_____ 17. If $f(x) = [x] + 1$, find $f(.5)$

_____ 18. Find the x-intercept of 2x + 5y = 10

_____ 19. Graph the DOMAIN of $y = \sqrt{\dfrac{x}{x+1}}$ on the number line

_____ 20. Determine the slope of $y = 3x^2 - 8$ at (x, y)

Many thanks to Kathy Rivers who retyped this droodle!