

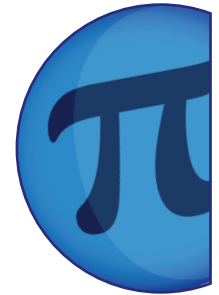


Fractals: The Koch Snowflake

NAME:

CLASS:

DATE:



Basic/Core/Advanced

1) The area of an equilateral triangle can be found using the formula: $Area = \frac{s^2\sqrt{3}}{4}$

Fill in the table below calculating the area of an equilateral triangle of the given size. In the last column divide the area of the triangle you are considering by the area of the previous triangle.

Triangle	Size of side (s)	Area	Area ÷ Previous Area
a	1		-----
b	2		
c	4		
d	8		
e	16		

Note and discuss your findings.

2) Fill in the table below calculating the area of an equilateral triangle of the given size. In the last column, divide the area of the triangle you are considering by the area of the previous triangle.

Triangle	Size of side (s)	Area	Area ÷ Previous Area
a	1		-----
b	3		
c	9		
d	27		
e	81		

Note and discuss your findings. Compare your results to the previous table.

3) Find the next three terms in the geometric sequences below.

a) 3, 6, 12, 24...

b) 2, 10, 50...

c) 512, 256, 128...



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ANSWERS

Basic/Core/Advanced

1)

Triangle	Size of side (s)	Area	Area ÷ Previous Area
a	1	0.433	-----
b	2	1.732	4
c	4	6.928	4
d	8	27.713	4
e	16	110.851	4

2)

Triangle	Size of side (s)	Area	Area ÷ Previous Area
a	1	0.433	-----
b	3	3.897	9
c	9	35.074	9
d	27	315.666	9
e	81	2,840.996	9

3) a) 48, 96, 192

b) 250, 1250, 6250

c) 250, 1250, 6250