

Name : _____

Score : _____ Date : _____

Fibonacci Sequence Worksheet

- 1 Find out the next terms in the following Fibonacci style sequence.

[Use: $F_n = F_{n-1} + F_{n-2}$]

a) 2, 1, 3, 4, 7, _____, _____, _____

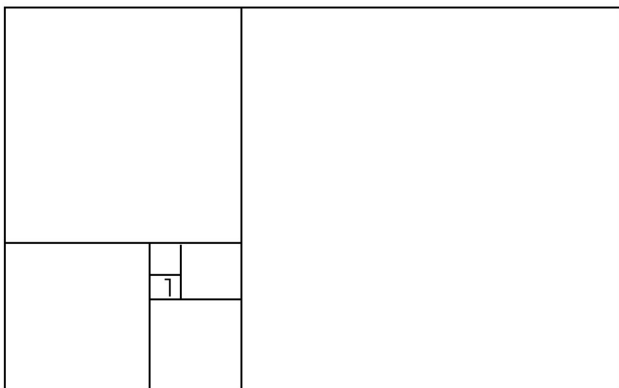
b) 4, 8, 12, 20, 32, _____, _____, _____

c) 0, 12, 12, 24, 36, _____, _____, _____

d) 13, 7, 20, 27, 47, _____, _____, _____

- 2 Find out the 16th Fibonacci number (F_{15}) when $F_{13} = 233$, $F_{14} = 377$.

- 3 Use the Fibonacci Sequence to complete the following diagram.



- 4 Determine the following values in the Fibonacci Sequence.

[Use: $F_{-n} = (-1)^{n+1} F_n$]

a) $F_{-6} =$ _____

b) $F_{-8} =$ _____

- 5 Find out the sum of first 13 terms. [Use: $\sum_{i=0}^n F_i = F_{n+2} - F_2$]

- 6 Complete the pattern using the Fibonacci Sequence (upto 7 terms)

a) 7, 9, 16, _____

b) 2, 14, 16, _____

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Fibonacci Sequence Worksheet

Answers

- 1 Find out the next terms in the following Fibonacci style sequence.

[Use: $F_n = F_{n-1} + F_{n-2}$]

a) 2, 1, 3, 4, 7, 11, 18, 29

b) 4, 8, 12, 20, 32, 52, 84, 136

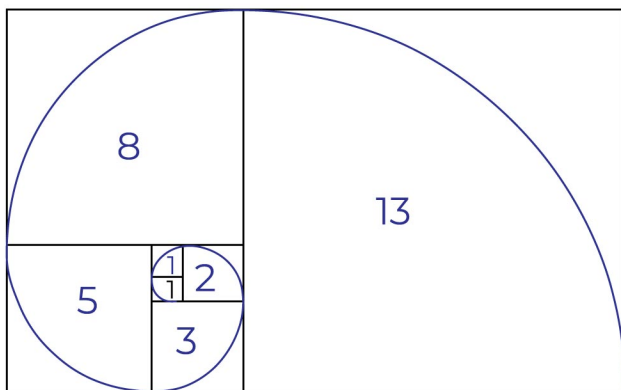
c) 0, 12, 12, 24, 36, 60, 96, 156

d) 13, 7, 20, 27, 47, 74, 121, 195

- 2 Find out the 16th Fibonacci number (F_{15}) when $F_{13} = 233$, $F_{14} = 377$.

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- 3 Use the Fibonacci Sequence to complete the following diagram.



- 4 Determine the following values in the Fibonacci Sequence.

[Use: $F_{-n} = (-1)^{n+1} F_n$]

a) $F_{-6} = \underline{-8}$

b) $F_{-8} = \underline{-21}$

- 5 Find out the sum of first 13 terms. [Use: $\sum_{i=0}^n F_n = F_{n+2} - F_2$]

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- 6 Complete the pattern using the Fibonacci Sequence (upto 7 terms)

a) 7, 9, 16, 25, 41, 66, 107

b) 2, 14, 16, 30, 46, 76, 122