

Convert the following into continued fractions

1) $\frac{17}{11}$	2) $\frac{51}{33}$	3) $3.54 = \frac{354}{100}$
4) $\frac{233}{177}$	5) $.23 = \frac{23}{100}$	6) $\frac{355}{106}$

Convert the following to a fraction in the form  $\frac{p}{q}$

7) $3 + \frac{1}{4 + \frac{1}{1 + \frac{1}{5}}}$	8) $0 + \frac{1}{2 + \frac{1}{1 + \frac{1}{4 + \frac{1}{2}}}}$	9) $3 + \frac{1}{7 + \frac{1}{15 + \frac{1}{1}}}$ (Compare to the value of $\pi$ )
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Convert the following into Continued Fractions and compare with problems 1) & 2)

10) $\frac{11}{17}$	11) $\frac{33}{51}$	
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Find a positive solution of the following quadratic equations as a continued fraction.

12) $x^2 - 2x - 3 = 0$	13) $x^2 - 3x - 2 = 0$	13) $2x^2 - x - 1 = 0$
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Convert the following infinite continued fractions to the form  $a \pm \sqrt{b}$

14) $2 + \frac{1}{1 + \frac{1}{2 + \frac{1}{1 + \frac{1}{2}}}}$	15) $1 + \frac{1}{3 + \frac{1}{3 + \frac{1}{3 + \frac{1}{3}}}}$	16) $1 + \frac{1}{2 + \frac{1}{3 + \frac{1}{1 + \frac{1}{2 + \frac{1}{3 + \frac{1}{1}}}}}}$
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17) Use a search engine on the internet or the library and find an example of the golden ratio in architecture or art, and describe it. A short paragraph will do but please document any resources you use.

18) Use a search engine on the internet or the library to find an example of the Fibonacci sequence in nature, and describe it. A short paragraph will do but please document any resources you use.

19) Describe a way that you use mathematics in your everyday life. A sentence or short paragraph will do.