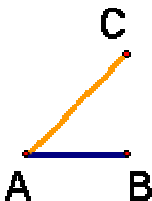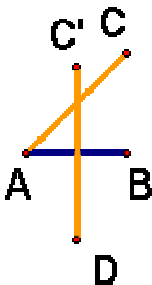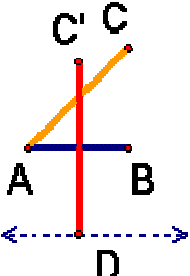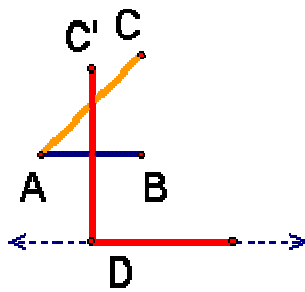# Construct the Square Root of 5

This construction uses the constructions of √2 and √3. The algebraic formula is $(\sqrt{2})^2 + (\sqrt{3})^2 = (\sqrt{5})^2$.

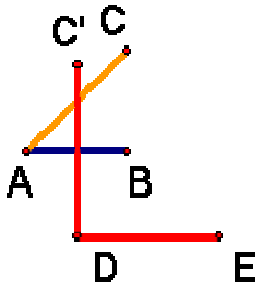**How to construct the square root of 5:**

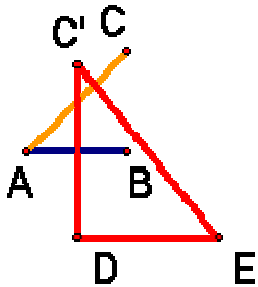|	
A B	1. Let the line segment AB be unity (A line segment of length 1).
C A B	2. Construct √2 using AB as unity. (See http://mcadamsmath.tripod.com/numbers/cons_sqrt_2.pdf)
C' C A B D	3. Construct √3 using AB as unity. (see http://mcadamsmath.tripod.com/numbers/cons_sqrt_3.pdf)
C' C A B D	4. Draw a line parallel to AB through point D.

5. Draw a line of length AC with endpoint D in the parallel line.

6. Mark the other endpoint of the line just drawn as E.

7. Draw line segment C'E. The length of C'E is √5.