

9. Sin on Cos Can Turn Into Tan

(Santa Claus is Coming to Town)

You'd better swot up, it's hard to get by
Unless you know the graphs from 0 to 2π ,
Sin on cos can turn into tan.

You're squaring sin x, squaring the cos,
You're going to get one whatever x was,
Sin on cos can turn into tan.

You even know the hard ones,
you barely have to check
You know that $1 + \tan^2 x$
becomes the square of sec!

You've drawn it all out, it's easy to see,
Cos pi by six is half of root 3
Sin on cos can turn into tan.

You've picked up all the formulas,
you've read them through and through
The area of a sector
is $r^2 \theta$ over two

You used to hate radians, now it's your strength
Since you learned that $r \theta$ gives the arc-length
Sin on cos can turn into tan.

Your teacher's in a Santa hat,
you swear that you don't know her
Because there's really no excuse
for ho-ho-soh-cah-toa.

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