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Sadler
  9A) P162.
 1) 2 \cos^2 \theta + 3 = 5 - 2 \sin^2 \theta
LHS-RHS = 2005-0+3+25120-5
        - = 2 (cos 0+sing) - 2.
 = 2 - 2 = 0 :, LHS = RHS 2.
2) 8in\theta - \cos^2\theta = Sin\theta (1 + Sin\theta) - 1
 LHS-RHS = SIND-0030-SIND (1+SIND) +1
          = $700 - co30 - 8100 - sin'0 +1
          = - (cos 0 + sin 0) +1
          = -1+1=0-2, LHS=RHS
 3) (Sin0 + cos 0)
  = Sin20 + Co320 + 2 sin0 tos 12
   = 1 + 2 sind cost. D.
 4)
               RHS = (SiNO-COSTO)2 = Sin 70 + Cos70-252004
                                         = 1 -
                                                       25.20 Cs
 5). Sîn40- Cos40
                                         = 145
   = (sin20+ co270) (sin20-cos79)
    = Sin0 - con20
    = sing + coil - 2 cosy
    = 1 - 20059.
 6) Sin40 - Sin20 = sin20 (sin20-1)
                      = 5in20 (Sin70 - Sin20 - cos20)
                       = Sin 20 (-cos 20) = - sin 20 cos 20.
RHS= CO340 - CO30 = CO370 (CO370-1)
                      = Cos20 ( Cos20 - 51270 - Cos20)
                       = 0050 (- sino) = - sino coso. a.
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$$\frac{189ht = +cn^{2}\theta - sin^{2}\theta}{\cos^{2}\theta} = \frac{sin^{2}\theta \cos^{2}\theta}{\cos^{2}\theta} = \frac{sin^{2}\theta (1-80r^{2}\theta)}{\cos^{2}\theta}$$

$$= \frac{sin^{2}\theta \cdot sin^{2}\theta}{\cos^{2}\theta}$$

$$= \frac{sin^{4}\theta \cdot sin^{2}\theta}{\cos^{2}\theta} = \frac{1}{\cos^{2}\theta}$$

$$= \frac{1}{\cos^{2}\theta} = \frac{1}{\cos^{2}\theta}$$

$$= \frac{1}{\cos^{2}\theta} = \frac{1}{\cos^{2}\theta} = \frac{1}{\cos^{2}\theta}$$

$$= \frac{1}{\frac{1}{\cos 9} + \frac{\sin 9}{\cos 9}} = \frac{1}{\frac{\cos 9 + \sin 9}{\cos 9}} = \frac{1}{\cos 9}$$

$$= \frac{\cos 9 + \sin 9}{\cos 9} = \frac{1}{\cos 9}$$

$$= \cos 9 = \text{right}$$

U,

11) 
$$left = \frac{(\cos \theta + 1)(\cos \theta + 1)}{1 - \cos \theta} = \frac{(\cos \theta + 1)(\cos \theta + 1)}{(1 - \cos \theta)(1 + \cos \theta)}$$
  
=  $\frac{1 + \cos \theta}{1 - \cos \theta} = right$ 

$$\frac{12) \text{ left} = \frac{\sin^2 \theta - \cos \theta (1-\cos \theta)}{(1-\cos \theta) \sin \theta} = \frac{\sin^2 \theta - \cos \theta + \cos \theta}{(1-\cos \theta) \sin \theta} = \frac{1}{(1-\cos \theta) \sin \theta} = \frac{1}{(1-\cos \theta) \sin \theta} = \frac{1}{\sin^2 \theta} = \frac{1}{\sin^2 \theta} = \frac{1}{\cos^2 \theta} = \frac{1}{\sin^2 \theta} = \frac{1}{\cos^2 \theta} = \frac{1}{\cos^2$$

$$\frac{3}{-\cos^{2}\theta - \sin^{2}\theta - \sin\theta \cos\theta} = \frac{\sin\theta (\sin\theta - \cos\theta)}{\cos\theta (\sin\theta - \cos\theta)} = \frac{\sin\theta}{\cos\theta}$$

$$= +\cos\theta - right$$