Unit 5 Part I Test Review

① 5cos(x+垩)

5(cosx cos = - sinx sin =)
5(cosx (0) - sinx (1))
5 (-sinx)
- 5Sin X (C)

- 2 2 Sin (3x + 15) 2 (5in 3x cos 15 + cos 3x sin 15) 2 ((sin(3x))(15) + (cos (3x)) 2 (15 sin(3x) + 15 cos (3x)) 13 sin(3x) + cos (5x) (E)
- 3 tan (\(\frac{4}{4} + x\)
 \(\frac{+an\frac{4}{4}}{1-tan\frac{4}{4} + anx}\)
 \(\frac{1+tan\frac{4}{4}}{1-tanx}\)
 \(\frac{1+tan\frac{4}{4}}{1-tanx}\)
 \(\frac{1}{1-tanx}\)
- ④ COS(A-B) Acute <s= QI SinA= 를 Sin B=등

cosAcosb+ sinAsinB

- (5) sin42° cos48° + cos42° sin48° sin (A+B) A=42° B=48° sin (42+48) sin 90° = 1
- © Sin (90-θ)

 COFUNCTION

 COS θ (A)
- Fin A= 岩 tan B= 記 Sin (A+B) Sin Acos + as Asin B

- Sin 0 = coso 45°
- $\begin{array}{l}
 \text{Sin N°} = & \cos(x+10)^{\circ} \\
 \sin x = & \cos(90-x) \\
 \cos 30^{\circ} = & \cos(x+10) \\
 30 = & x+10 \\
 20 = & x
 \end{array}$
- 04/01/202004500 (07 + 04)
- sin 96 cos 24+ cos 96 sin 24 sin (90+24) $sin 120^{\circ}$ $sin 100^{\circ}$
- (12) sin(180+A)
 sin 180 cos A + cos 180 sin A
 0 · cos A + (-1) sin A
 sin A

 (D)
- (13) sin 210 cos 30 cos 210 sin 30 sin (A-B)

sin (210-30)
Sin 180° = 0 C

(II) $\sin 76^{\circ} = \sin (80^{\circ} + 45^{\circ})$ $\sin 30 \cos 45 + \cos 30 \sin 45$ $\frac{1}{2} (\frac{1}{42}) + \frac{13}{2} (\frac{1}{12}) = \frac{1}{2\sqrt{12}} + \frac{13}{2\sqrt{12}} = \frac{1+\sqrt{3}}{2\sqrt{12}} \cdot \frac{12}{4}$ $= \frac{12+\sqrt{10}}{4}$

- (15) $\cos(2x-1) = \sin(3x+40)$ $\cos \theta = \sin(40-\theta)$ 2x-1 = 40-3x+40 2x-1 = 40-3x-405x = 85
- $\begin{array}{c}
 x = 17 \\
 \text{(i)} & \sin(x+20) = \cos x \\
 x+20 = 90-x \\
 x = \sin(40-x) \\
 \sin(x+20) = \sin(40-x)
 \end{array}$
- 2x = 70x = 35(1) $\tan A = \frac{3}{5}$ $+ \tan B = \frac{1}{2}$ $+ \tan (A+B) = \frac{\tan A + \tan B}{1 - \tan A + \tan B} = \frac{3}{5} + \frac{1}{2}$ $\frac{7}{4} = \frac{7}{4} \cdot \frac{4}{5} = \frac{7}{4}$ (D)

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*Remember: get stuff in terms of sin $ cos!
Review part 2 (Identities Quiz A)
                                                                        You get a formula chart on test!
                                                     (8) Sec^2\theta + csc^2\theta
(T) secx-tanx
                                                       \frac{\sin^2\theta}{\sin^2\theta} \cdot \frac{1}{\cos^2\theta} + \frac{1}{\sin^2\theta} \cdot \frac{\cos^2\theta}{\cos^2\theta}
       \frac{1}{\cos x} - \frac{\sin x}{\cos x}
         1-Sinx
                                                              Sin 20+ cos 20
          wsx.
                                                                Sin20 cos20
(2) \sin^2 x + \cos^2 x
                                                                sin20cc20
           Sinx
          1
                                                       9 \frac{\sin^2 B}{\cos B} + \cos B \frac{\cos B}{\cos B}
       Siny
       cscx (A)
                                                               sin2B+0052B
3 (CSCY-SECY)
                                                                    COSB
                                                                   COSB B
     cosycscy - cosy secy
                                                         (\Theta \cos - Gye) \Theta \cos \Theta
     cosy . Finy - cosy . Cosy
                                                                \cos\theta \sec\theta - \cos^2\theta
    1- 1
                                                                   1-\cos^2\theta
    coty-1 @
                                                                    sin20 C
                                                           (11) csco tano coso
 (4) coto seco
                                                                  sind cost = | A
        1050 G880
                                                       (12) sin\theta(cot\theta-csc\theta)
sin\theta(\frac{cos\theta}{sin\theta})-sin\theta csc
       \frac{\sin \theta}{1} = \csc \theta
                                                                   use-1
   (Quotient identity itse!)
                                                         3 sinxcosx
+anx
         cose sine
                                                                 \frac{\sin x \cos x}{\sin x} = \frac{3 \cos \cos x}{\cos x} = \cos x
                                                                    Sinx
          tane ©
                                                           (14) PYDVe:
                                                                           \frac{1}{1-\cos\theta} - \frac{1}{1+\cos\theta} = 2\csc\theta\cot\theta
 6 I-sin2A
                        cos2x+sin2x=1
                                                 Left: common
         2 cosA
                                                                           1+cosθ <u>1-cosθ</u>
                                                                       (H(OSB)(1-(OSB)) (HOSB)(1-(OSB) 	 diff. of squares
        cos<sup>2</sup>A
                                                                              1+(050-(1-(05<del>0</del>)
        2 cosA
                                                                                  1-cos20
         COSA (B)
                                                                                2\cos\theta
                                                                                 sin 20
  (£) (6CX · C?CX · CO2X
                                                                              2 cosθ
         OBSX SINX COSX
                                                                                 sind sind
                                                                            2 cotθ cscθ Ü
         \frac{1}{\sin x} = \csc x
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*There will be at least one proof on test!