

$$\operatorname{tg}'x = \frac{1}{\cos^2 x}$$

$$\cos'x = -\sin x$$

$$\sin'x = \cos x$$

$$f(x) = 7\sin x - \cos 2x - 3 \quad .1$$

$$f'(x) = \underline{\hspace{2cm}} + \underline{\hspace{2cm}} \quad \blacklozenge$$

$$f(x) = \sin x + \frac{1}{2}\cos 2x - 3 \quad .2$$

$$f'(x) = \underline{\hspace{2cm}} - \underline{\hspace{2cm}} \leftarrow f'(x) = \underline{\hspace{2cm}} - \frac{1}{2} \underline{\hspace{2cm}} \quad \blacklozenge$$

$$f(x) = \sin x - \cos^2 x - 1 \quad .3$$

$$f'(x) = \underline{\hspace{2cm}} + \underline{\hspace{2cm}} \leftarrow \sin 2x = 2\sin x \cos x \text{ לפי הזהות } f'(x) = \underline{\hspace{2cm}} + 2 \underline{\hspace{2cm}} \quad \blacklozenge$$

$$f(x) = \sin^2 x - \cos x - 1 \quad .4$$

$$f'(x) = \underline{\hspace{2cm}} + \underline{\hspace{2cm}} \leftarrow f'(x) = \underline{\hspace{2cm}} + \underline{\hspace{2cm}} \quad \blacklozenge$$

$$f(x) = \cos^4 x - \sin^4 x - 2\cos x + 1 \quad .5$$

$$f(x) = (\underline{\hspace{2cm}} - \underline{\hspace{2cm}}) \overbrace{(\underline{\hspace{2cm}} + \underline{\hspace{2cm}})}^1 - 2 \underline{\hspace{2cm}} + \underline{\hspace{2cm}} \text{ תחילה נפשט את הפונקציה } \quad \blacklozenge$$

$$\leftarrow \cos^2 x - \sin^2 x = \cos 2x \text{ לפי הזהות } f(x) = (\underline{\hspace{2cm}} - \underline{\hspace{2cm}}) - \underline{\hspace{2cm}} + \underline{\hspace{2cm}}$$

$$f'(x) = - \underline{\hspace{2cm}} + 2 \underline{\hspace{2cm}} \leftarrow f(x) = \underline{\hspace{2cm}} - 2 \underline{\hspace{2cm}} + \underline{\hspace{2cm}}$$

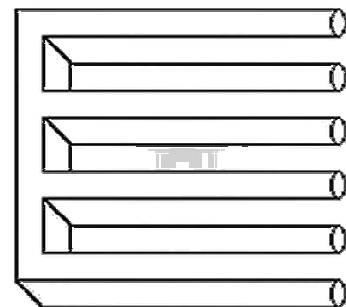
$$f(x) = \frac{1}{\sin x} + \frac{1}{\cos x} \quad .6$$

$$f'(x) = - \frac{\underline{\hspace{2cm}}}{\underline{\hspace{2cm}}} + \frac{\underline{\hspace{2cm}}}{\underline{\hspace{2cm}}} \leftarrow \left( \frac{1}{f(x)} \right)' = \frac{f'(x)}{f^2(x)} \text{ תזכורת: } \quad \blacklozenge$$

תשובות: .1  $7\cos x + 2\sin x$  .2  $\cos x - \sin 2x$  .3  $\cos x + \sin 2x$  .4  $\sin 2x + \sin x$

$$.5 \quad -2\sin 2x + 2\sin x \quad .6 \quad -\frac{\cos x}{\sin^2 x} + \frac{\sin x}{\cos^2 x}$$

### עבודה נעימה



<http://www.amazing.up.co.il>