

$$f(x) = x^2 - 4\sin x$$

check if even:

$$f(-x) = (-x)^2 - 4\sin(-x)$$

$$= x^2 - 4(-\sin x)$$

$$= x^2 + 4\sin x \neq f(x)$$

so not even.
also not equal to $-f(x)$, so not odd

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Defⁿ A function $f(x)$ is
is decreasing (going down as you
read from left to right) on an
interval I , if
 $f(x_1) < f(x_2)$ whenever
 $x_1 < x_2$ in I .

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eg
#24.
 $f(x) = x^3$, find $\frac{f(a+h) - f(a)}{h}$

get

$$\frac{(a+h)^3 - a^3}{h}$$

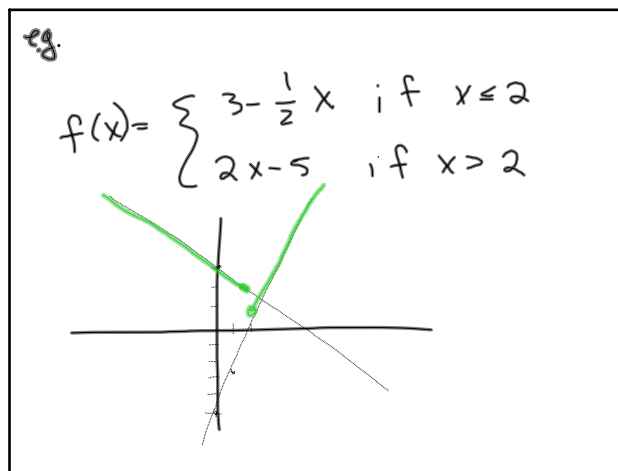
$$= \frac{a^3 + 3a^2h + 3ah^2 + h^3 - a^3}{h}$$

$$= \frac{3a^2h + 3ah^2 + h^3}{h}$$

$$= \frac{(3a^2 + 3ah + h^2)h}{h}$$

$$= 3a^2 + 3ah + h^2$$

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