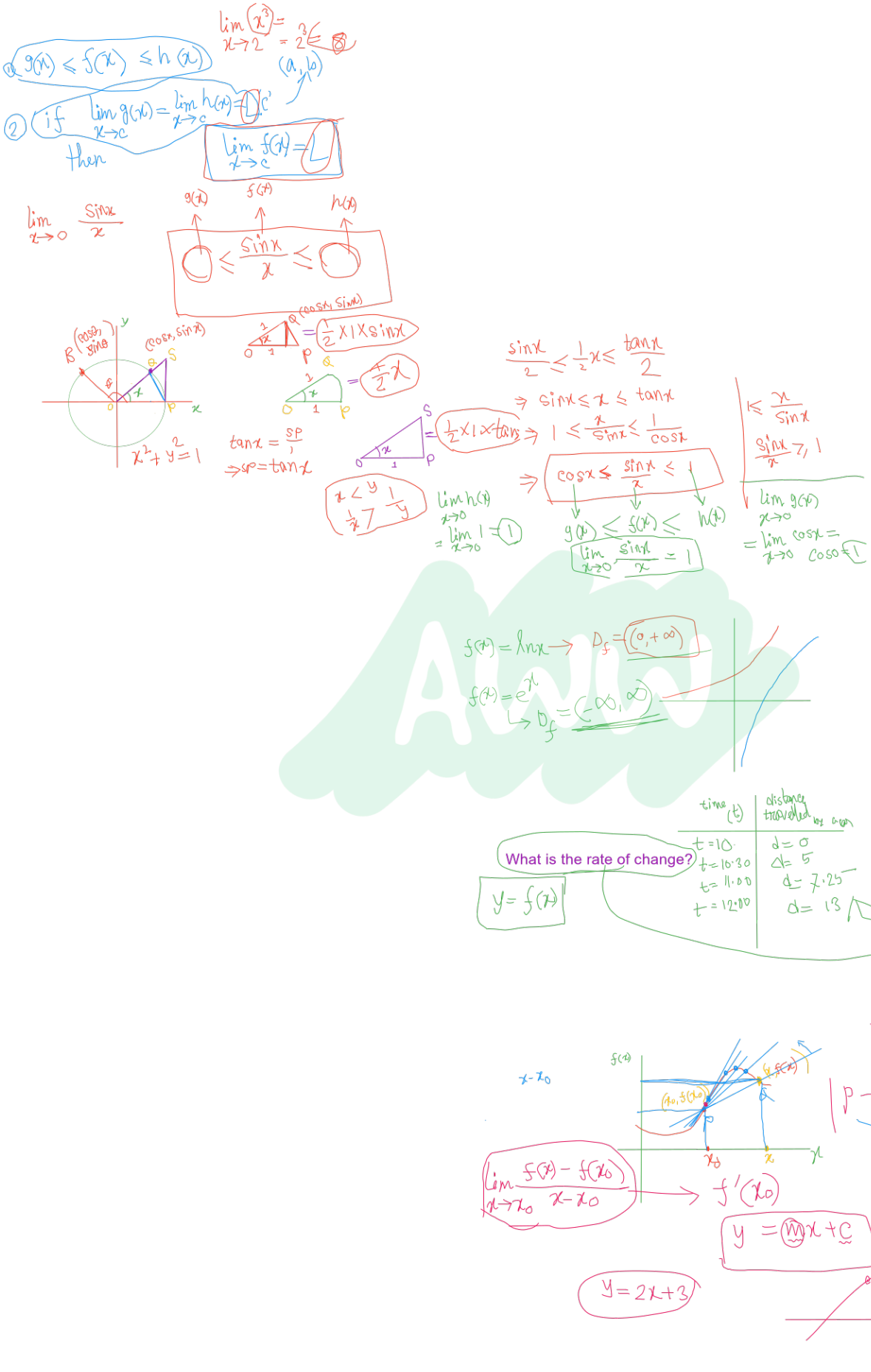
① g(x) ≤ f(x) ≤ h(x)
② if lim g(x) = lim h(x) = L
then lim f(x) = L
lim x→2 (x³) = 2³ = 8
(a, b)
lim x→0 sinx/x
g(x) f(x) h(x)
sinx/x
(cosx, sinx)
tanx = SP/1
⇒ SP = tanx
x² + y² = 1
sinx/2 ≤ 1/2 x ≤ tanx/2
⇒ sinx ≤ x ≤ tanx
⇒ 1 ≤ x/sinx ≤ 1/cosx
⇒ cosx ≤ sinx/x ≤ 1
g(x) ≤ f(x) ≤ h(x)
lim x→0 sinx/x = 1
lim x→0 h(x) = lim x→0 1 = 1
lim x→0 g(x) = lim x→0 cosx = cos0 = 1
x < y
1/x > 1/y
f(x) = lnx → Df = (0, +∞)
f(x) = e^x → Df = (−∞, ∞)
time (t)
distance travelled
t = 10 d = 0
t = 10:30 d = 5
t = 11:00 d = 7.25
t = 12:00 d = 13
What is the rate of change?
y = f(x)
x − x0
lim x→x0 (f(x) − f(x0))/(x − x0) → f'(x0)
lim a→p |p − a|
y = mx + c
y = 2x + 3