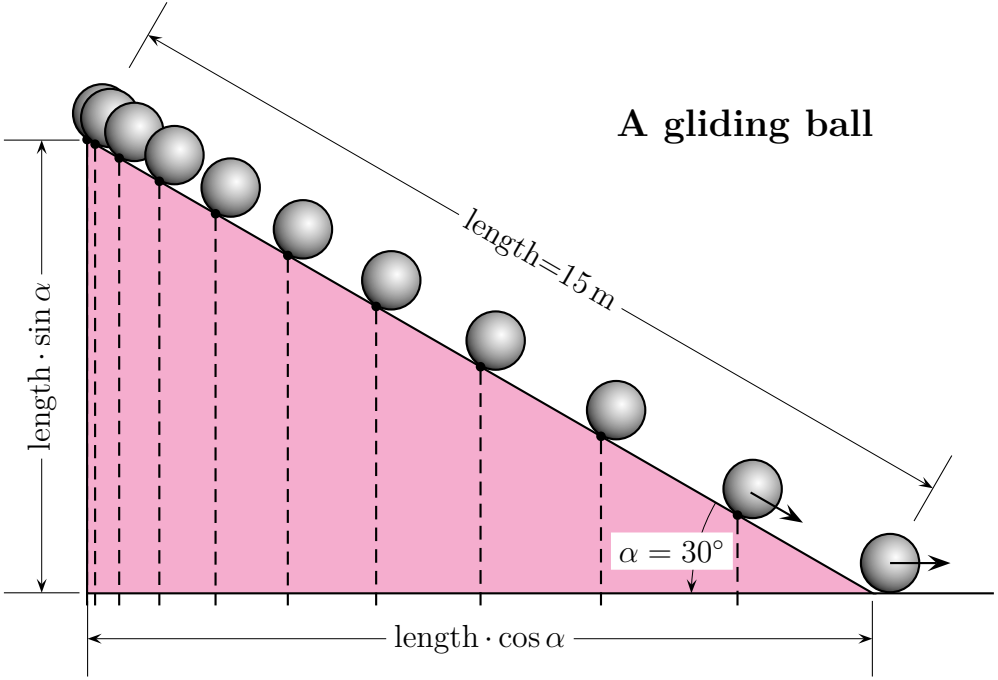
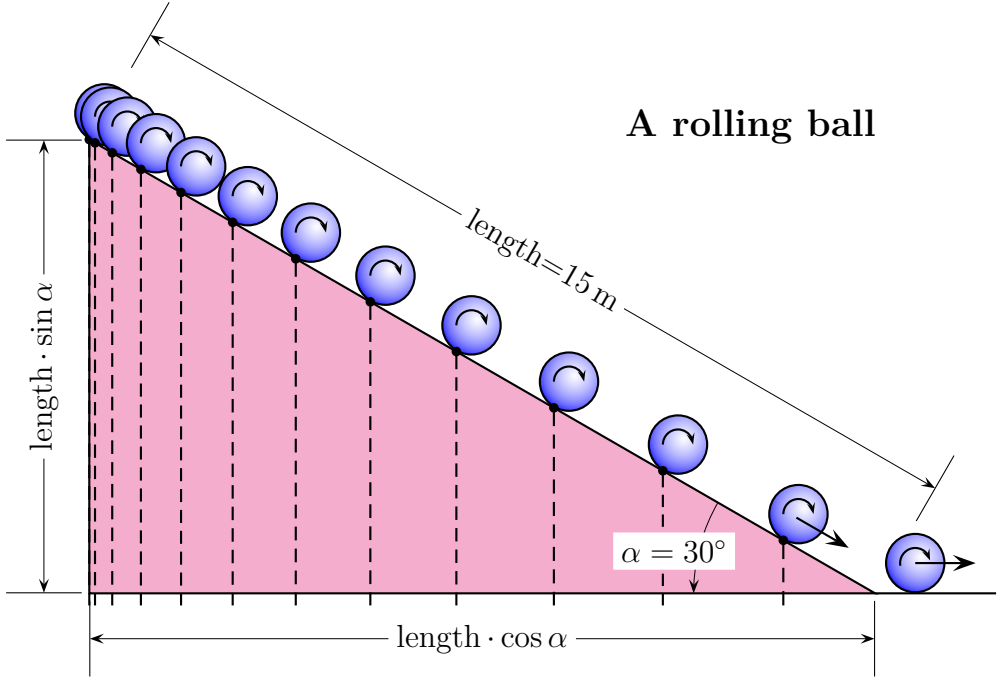
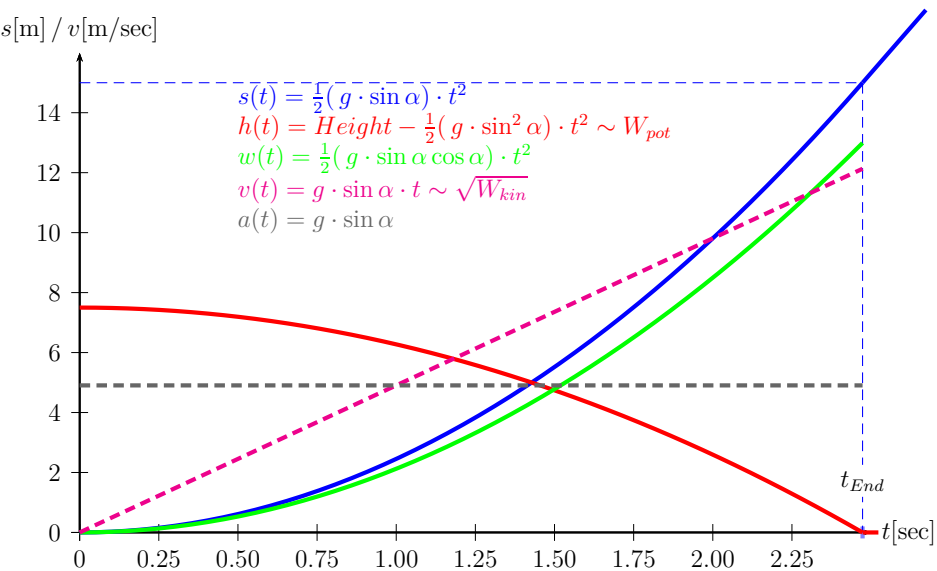
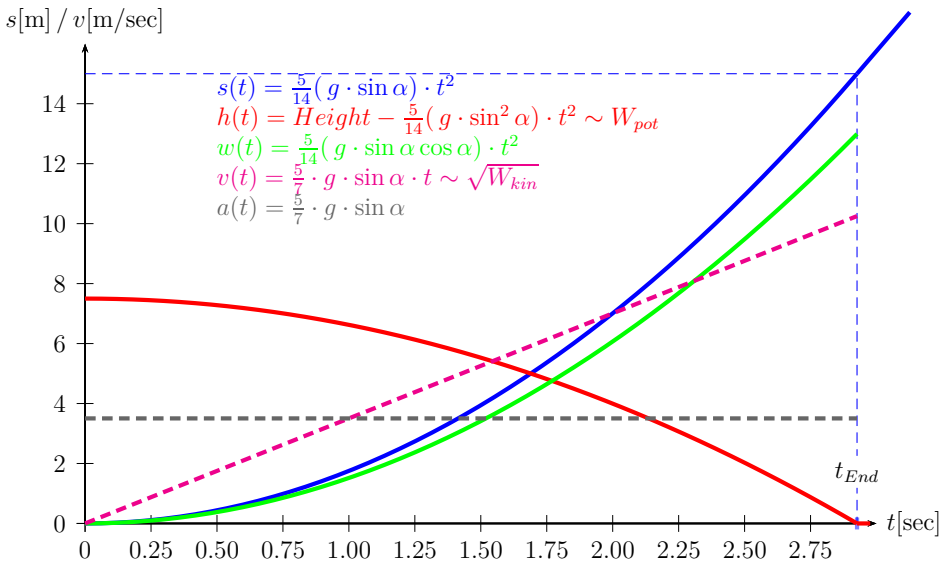

A gliding ball
length=15 m
length · sin α
α = 30°
length · cos α


A rolling ball
length=15 m
length · sin α
α = 30°
length · cos α


s[m] / v[m/sec]
s(t) = 1/2 (g · sin α) · t²
h(t) = Height − 1/2 (g · sin² α) · t² ∼ W_pot
w(t) = 1/2 (g · sin α cos α) · t²
v(t) = g · sin α · t ∼ √W_kin
a(t) = g · sin α
t_End
t[sec]
0 0.25 0.50 0.75 1.00 1.25 1.50 1.75 2.00 2.25
0 2 4 6 8 10 12 14


s[m] / v[m/sec]
s(t) = 5/14 (g · sin α) · t²
h(t) = Height − 5/14 (g · sin² α) · t² ∼ W_pot
w(t) = 5/14 (g · sin α cos α) · t²
v(t) = 5/7 · g · sin α · t ∼ √W_kin
a(t) = 5/7 · g · sin α
t_End
t[sec]
0 0.25 0.50 0.75 1.00 1.25 1.50 1.75 2.00 2.25 2.50 2.75
0 2 4 6 8 10 12 14