8 $F = 20\,000\ N$ $d = 1\ km = 1000\ mt$ $m = 20\ Ton$

$T = F.d.\cos\alpha$

$T = 20000 \cdot 1000 \cdot 1 = 20\,000\,000\ J$

¿y trabajo hace por cada hora si la velocidad es d 36 km/hr?

$T = 20\,000\,000 \cdot 36 = 7'200,000,000\ J$ //

9 Datos

$m = 65\ kg$ $T = m.g.d$ $T = (65\ kg)(4.81\ m/s^2)(10\ m) =$

$d = 10\ m$ $T = 637\ 6.5\ J$ //

$F = 300\ N$

10 $F\ 24\ N$ $d = 10\ m$ $T = F.d.\cos\alpha$

A) $24.10.\cos(30°) = 24.10.0.86660254 = 207.85\ J$ //

B) $24.10.\cos(40°) = 24.10.0 = 0\ J$ //

C) $24.10.\cos(120°) = 24.10.(-0.5) = -120\ J$ //

11 $T = 2\ min = 120\ s$ $m = 1500\ kg$ $h = 1500\ cm = 15\ m$

$T = m.g.h$ $P = Trabajo \div tiempo$

$T = 1500\ kg \cdot 4.81 \cdot 15\ m = 220\ 725\ J$

$P = 220\ 725\ J \div 120\ s = 1834.38\ w$

$P = 1834.38 \div 1000 = 1.83438\ kw$

$P = 1834.38 \cdot 1.33 / 1000 = 2.4463\ cv$ //

12 $v = 50\ km/hr = 1\ km/h = 0.27777778\ m/s = 13.88\ m/s$

$F = P \div v$ $P = 40\ cv = 30075.19\ w$

$F = 30075.19 \div 13.88 = 2\,166.80\ Nw$

13 $T = 40\ seg$ $m = 350\ kg$ $h = 18\ m = d$

$T = m.g.h$ $P = T \div Tiem$

$T = 350 : 4.81 \cdot 18 = 61\,803\ J$ //

$P = 61803 \div 40 = 1545.08\ watts$

$P = 1545.08 \div 1000 = 1.545\,08\ kw$

14 $T = 5\ min = 300\ seg$ $m = 25000\ kg$ $h = 16\ km = d = 1600\ m/s$

$T = m.g.d$ $P = Trabajo \div Tiempo$

$T = 25000 : 4.81 \cdot 1600 = 342\,400\,000\ J$

$P = 342400000 \div 300 = 1308\,000\ w$

$P = 1308000 \cdot 1.33 \div 1000 = 1734.64\ cv$

15

$P = 20\ cv = (20 \cdot 1000 \div 1.33)$ $P = 15037.54\ w$ $v = 50\ m/mn = 0.833\ m/s$

$P = F.v$ $F = P \div v$

$F = 15037.54\ w \div 0.833\ m/s = 18052.33\ Nw$ //

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