Science 10

Thursday, April 13/17

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1. Assignment -> Digits, Rounding and Rules
   -> Tuesday, April 18/17

2. Roller Coaster Day #2 - Period 1

Physics 112

Thursday, April 13/17

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1. Return -> FA - Force Problem
2. Newton's Third Law of Motion
3. SA - U2 S2 - Tuesday, April 18/17 MC Prob.
4. U2 S3 - Introduction to Momentum
5. Momentum - To Be Continued

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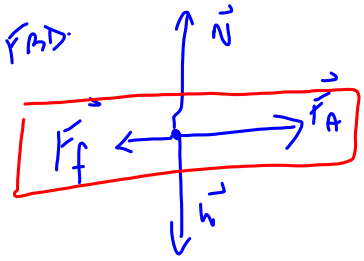
6. Impulse
7. Worksheet - Momentum and Impulse
8. Impulse-Momentum Theorem

Formative Assessment - Force Problem → 0.204 (right)

An object that has a mass of 36.0 kg is pushed along a horizontal surface with a force of 85.0 N. If the acceleration of the object is 0.361m/s², what is the coefficient of friction between the object and surface?

① $\vec{F}_{net} = m\vec{a}$ = ② $\vec{F}_{net} = m\vec{a}$ + K. eq. $\vec{v}_i, \vec{v}_f, \vec{d}, t$ = ③ $\vec{F}_{net} = m\vec{a}$ + Ind. Forces. $\vec{F}_A, \vec{F}_f, \vec{T}, \vec{N}, \vec{W}$



$N = W$ ✓
$F_A \neq F_f$
$F_f = \mu N$ ✓
$W = mg$ ✓
$\vec{F}_{net} = m\vec{a}$ ✓

$\vec{F}_{net} = m\vec{a}$

$+F_A - F_f = m(+a)$

$F_A - \mu N = ma$

$F_A - \mu W = ma$

$F_A - \mu mg = ma$

$F_A - ma = \mu mg$

$\frac{F_A - ma}{mg} = \mu$

$\mu = 0.204$ $\mu < 1$

WS

Worksheet - Extra Force Prob.

10. $m = 0.17\,kg$

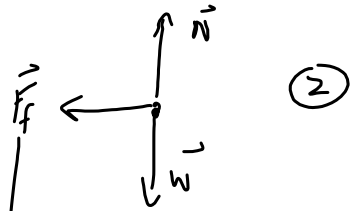
$\vec{v}_i = +15\ m/s$

$\vec{d} = +5.1\,m$

$\mu = 0.47$

$\vec{v}_f = ?$

$\Rightarrow \vec{w}, \vec{N}, \vec{F}_f$



(2)

$\vec{F}_{net} = m\vec{a}$

$-F_f = m(-a)$ (2)

$\mu N = ma$ (1)

$\mu mg = ma$ (1)

$a = \mu g$ (1)

$a = (\quad)(9.80)$

$a = 3.5$ (1)

$\vec{a} = \ominus$ ___ m/s^2 (1)

$\vec{v}_f^{\,2} = \vec{v}_i^{\,2} + 2\vec{a}\vec{d}$ (1)

$\vec{v}_f = \sqrt{\vec{v}_i^{\,2} + 2\vec{a}\vec{d}}$ (1)

$\vec{v}_f = \oplus\ 25$ (1) m/s

WS

Physics 122

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1. Formulas For Uniform Circular Motion - Continue
2. Worksheet - Uniform Circular Motion - HW
3. SA - U1S4 - 2D Collisions/Explosions

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4. Unbanked and Banked Curves
5. Worksheet - Unbanked and Banked Curves