p75 MC ~~1~~, 3, 6, 10, 16
p77 Problems 1, 6, 37, 39

(11)

- Multiple Choice

2) A Boat continue + car accel under
B car push boat forward ✗
✓ C: non inertial frame b/c boat move w/o extra objects
moving w/ car seems at rest.

(4) 1 each

3) Child lurch forward when stop stroller

a) Child doesn't lurch but continues motion
N1L

6) Inside boat, get it to move

d) Throw cargo out N3L

10) .1kg apple falls on Earth, true about F_g?

b) Same magnitude N3L $F_g = F_{\bar{g}}$

16) Closed box - bal + bird
Balance w/ stationary bird
What about when bird flaps?

Bird box same $F_{air} = F_g = F_{box}$

- Problems

Explain

1) 4 balls, unlabeled diagram, match w/ description

(1) Ball moving up after leave hand
(d) ↓ F_g only

(2) Hold ball in hand

(a) ↕ F balance

(2)

(3) Ball falling

(d) ↓ F_g only

(4) Throwing ball (still in hand)

(b) ↕ F_a up > F_g

(5) Lift ball at constant pace

(a) ↕ F balance

6) Throw ball up

a) motion diagram + Force diagram

way up:

A) v

B) F_g

way down:

C)

D) F_g

(3)

b) Position vs Time

E) y, t

f) Velocity vs Time

v, t

39) $F_g = 1\,N$ a) Same F N3L

b) $a_{apple} = \frac{F}{m} = \frac{1\,N}{.100\,kg} = 10\ m/s^2$

$a_{earth} = \frac{F}{m} = \frac{1\,N}{6\times10^{24}\,kg} = 1.7\times10^{-25}\ m/s^2$

(1)

Compare $\frac{a_E}{a_a} = \frac{1.7\times10^{-25}\ m/s^2}{10\ m/s^2} = 1.7\times10^{-26}$

ratio is unitless