Note Taking Guide – Episode 501

Forces can be transferred through the _____ on strings, chains, etc. A single _____ is used to change the _____ of the force without changing the magnitude.

Drawing Force Diagrams:

- A _____-_____ diagram shows all _____ acting on an object.
- _____ vectors start at the _____ of _____ and are drawn _____ from the _____.
- Pushes are drawn as _____ form the other _____.
- Weight vectors are drawn straight _____ from the object's _____ of _____ (the point where all the _____ of the object seems to act).

Example free-body diagrams of 2 forces acting on:

a. object hanging from string

b. bird sitting on perch

Problem Set #1 (Draw the one force described.)

a.

b.

c.

d.

e.

free-body diagram of 3 forces acting on swing seat:

concurrent forces -

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composition of forces –

Problem Set #2

1.

2.

3.

Equilibrium:

- When all _____ forces acting on an object cancel out (F_{net} = ___), the object is in a state of _____.
- Objects in equilibrium can be at _____ or in _____ motion.

Equilibrant Force:

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If F_{result} = 8.3n, 27° E of S, F_{equil} = _____n, _____° ___ of ___

Find equilibrant forces for problem set #2

1. 2. 3.

Problem Set #3 (on back)

Resolution of Forces:

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Example: