

# TORQUE AND STATIC EQUILIBRIUM

## Chapter 8-9 Assignments & Answers

### ASSIGNMENT:

#### Ch. 8-9 Problem Assignment:

HW due: \_\_\_\_\_

- Work textbook pg. 220 Problems #22-26
- Work textbook pg. 247-250 Problems #9, 11, 12, 16, 18, 20, 23-24, 27, 31, 32

### ANSWERS:

22.a. 92Nm

23.a. 41Nm

b. 29Nm

24. 1.4Nm, clockwise

25.  $mg(L_2 - L_1)$  clockwise

26. 314N, 1956N

3. 6.52kg

9.a. 2.25m from the adult

b. 2.54m from the adult

12. 194.6N, 258.3N

16. 1.1m

18.  $F_T = 205.8\text{N}$  $F_W = 205.8\text{N}$  $\theta = 40^\circ$ 20.  $F_T = 708\text{N}$  $F_{Hx} = 580\text{N}$  $F_{Hy} = -6\text{N}$ 

23.a. 0.78N

b. 0.98N

24.a. 254N

b. 2361N

27. 0.50

31. 990.2N

32.a. 249.9N

b. 243.5N