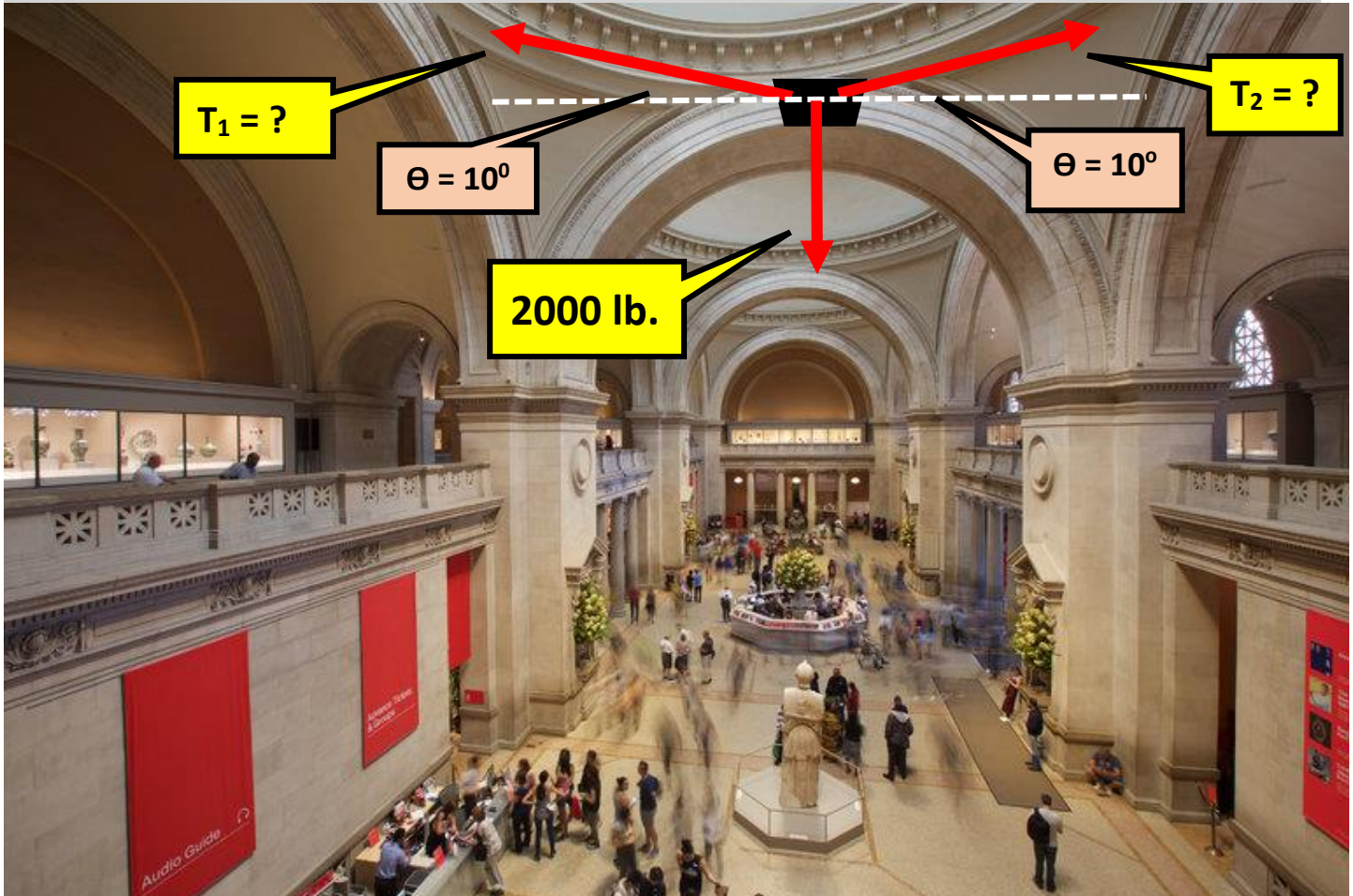


# STATICS

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78701 [jpcise@austincc.edu](mailto:jpcise@austincc.edu) & New York Times, January 11, 2017 by Robin Pogrebin, Dedicated to my Met Museum joint member, Gertrudes Cabacungan, My wife of 22 years. Many memories of parking our bikes in Met Garage and then visiting Museum.

## The Metropolitan Museum Will Delay a New \$600 Million Wing



The Great Hall, inside the Metropolitan Museum of Art.

It looks like the Metropolitan Museum of Art won't be celebrating its 150th anniversary in 2020 with a new wing after all. The Met on Wednesday morning informed its staff that it will push back plans for a \$600 million southwest wing dedicated to Modern and contemporary art as it takes new measures to get its financial house in order. The Met had hoped to complete construction of an extension to the Fifth Avenue building while it was still leasing the former Whitney Museum — now called the Met Breuer — on Madison Avenue. But the Met may not break ground on the new wing for as many as seven years, said Daniel H. Weiss, the Met's president and chief operating officer. Instead, the Met will concentrate on replacing the skylights and roofing system above the European paintings galleries, work that won't start until 2018 and is expected to last about four years.

**INTRODUCTION:** Purpose of this application is to find the compressive forces  $T_1$  and  $T_2$  which support the 2000 lb. key stone at top of arch seen in above picture.  $T_1$  and  $T_2$  are both pushing on the keystone at an angle of  $10^\circ$  above horizontal.

**QUESTIONS:** To be in static equilibrium:  $\sum F_x = 0$  &  $\sum F_y = 0$ . (a) Set up two working equations showing sum of forces in both X & Y direction adding up to zero?, (b) Solve for  $T_1$  &  $T_2$ ?

**HINTS:**  $\sin. 10^\circ = 0.174$ ,  $\cos. 10^\circ = 0.985$ ,

**ANSWERS:** (a) \_\_\_\_\_, (b)  $T_1 = T_2 = \sim 5,747$  lb.