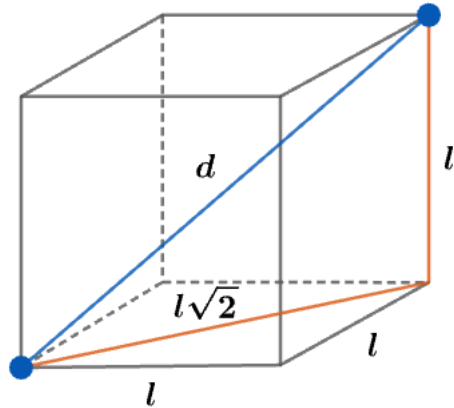


2008 F=ma Exam: Problem 2

Kevin S. Huang



By the Pythagorean theorem, if a cube has side length l , the displacement between opposite corners is

$$d = \sqrt{l^2 + (l\sqrt{2})^2} = l\sqrt{3}$$

In our case, $l = 3$ m so $d = 3\sqrt{3}$ m and the answer is .