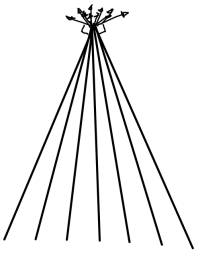
Shapes Algorithm

1. Cube
   1.1) $2n^2$.
   1.2) normal vectors = $(1, 0, 0)$

2. Cylinder
   2.1) $(0.5cos\theta, 0, 0.5sin\theta)$
   2.2) $(\frac{\sqrt{2}}{4}, 0, \frac{2}{7})$ for given point, $(cos\theta, 0, sin\theta)$ for an arbitrary point

3. Cone
   3.1) $1, 5, 9, 2n - 1$
   3.2) 
   3.3) $m = -2$
   3.4) $\frac{2}{\sqrt{5}}$
   3.5) $\frac{1}{\sqrt{5}}$

4. Sphere
   $x = rsin\phi cos\theta = \sqrt{2}/4$
   $y = rcos\phi = 0$
   $z = rsin\phi sin\theta = \sqrt{2}/4$
   vector = $(\frac{2\sqrt{2}}{4}, 0, \frac{2\sqrt{2}}{4})$

5. Design
   5.1) Use composition for functions that some shapes use, and inheritance for functions that all shapes use.