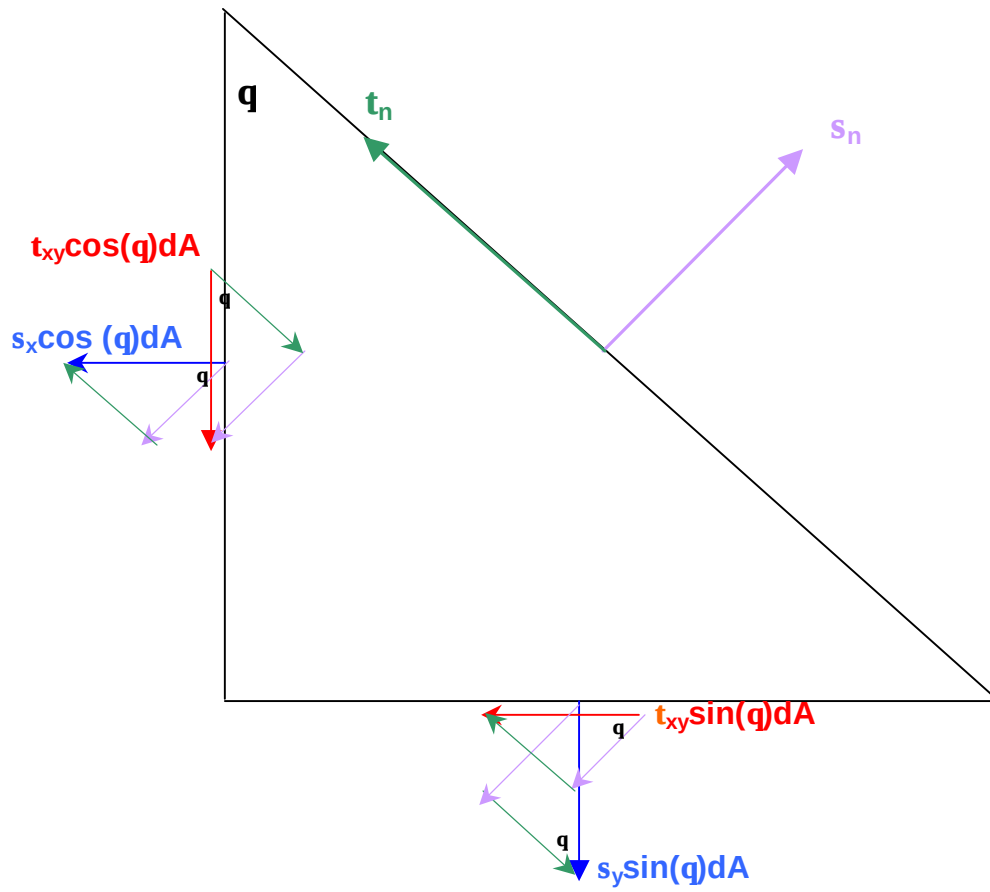
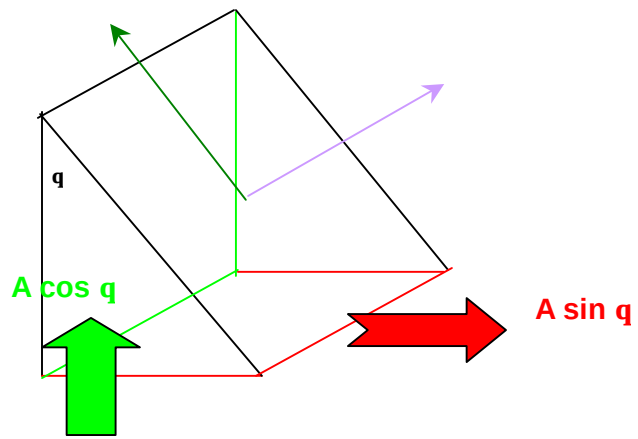




Summing forces in the s_n direction:

$$s_n dA - s_x \cos(q) dA \cdot \cos(q) - t_{xy} \cos(q) dA \cdot \sin(q) - s_y \sin(q) dA \sin(q) - t_{xy} \sin(q) dA \cdot \cos(q)$$

Summing forces in the t_n direction:

$$t_n dA + s_x \cos(q) dA \sin(q) - t_{xy} \cos(q) dA \cos(q) + t_{xy} \sin(q) dA \sin(q) - s_y \sin(q) dA \cos(q)$$

$$s_n = s_x \cos^2(q) + 2t_{xy} \cos(q) \cdot \sin(q) + s_y \sin^2(q)$$

$$t_n = (s_y - s_x) \cos(q) \sin(q) + t_{xy} (\cos^2(q) - \sin^2(q))$$