Figure III.12: An example of how a non-uniform scaling transformation affects a normal. The transformation maps \( \langle x, y \rangle \) to \( \langle \frac{1}{2}x, y \rangle \). The line with unit normal \( n_1 = \langle \frac{1}{\sqrt{2}}, \frac{1}{\sqrt{2}} \rangle \) is transformed to a line with unit normal \( n_2 = \langle \frac{2}{\sqrt{5}}, \frac{1}{\sqrt{5}} \rangle \).