Practice Problems on Sections 10.3, 10.4 - ANSWERS

1. \( \text{comp}_a b = -\frac{3}{\sqrt{2}}, \quad \text{proj}_a b = \langle -\frac{1}{2}, -\frac{1}{2}, -2 \rangle \).

2. a) 9; b) 13; c) 11; d) 6.

3. Ask in class

4. a) \( < -3, 3, 9 > \); b) \( < 1, 1, 2 > \).
   In both parts explicitly check that \( (a \times b) \cdot a = 0 \) and \( (a \times b) \cdot b = 0 \).