

$$a = a^x \mathbf{e}_x + a^y \mathbf{e}_y + a^z \mathbf{e}_z$$

$$b = \mathbf{e}_x + \mathbf{e}_y + \mathbf{e}_z$$

$$c = c^w \mathbf{e}_w + c^x \mathbf{e}_x + c^y \mathbf{e}_y + c^z \mathbf{e}_z$$

$$a \text{ reflect in } xy = a^x \mathbf{e}_x + a^y \mathbf{e}_y - a^z \mathbf{e}_z$$

$$a \text{ reflect in } yz = -a^x \mathbf{e}_x + a^y \mathbf{e}_y + a^z \mathbf{e}_z$$

$$a \text{ reflect in } zx = a^x \mathbf{e}_x - a^y \mathbf{e}_y + a^z \mathbf{e}_z$$

$$a \text{ reflect in plane } (x = y) = a^y \mathbf{e}_x + a^x \mathbf{e}_y + a^z \mathbf{e}_z$$

$$b \text{ reflect in plane } (x + y + z = 0) = -\mathbf{e}_x - \mathbf{e}_y - \mathbf{e}_z$$

$$\text{Reflect in } \mathbf{e}_x = a^x \mathbf{e}_x - a^y \mathbf{e}_y - a^z \mathbf{e}_z$$

$$\text{Reflect in } \mathbf{e}_y = -a^x \mathbf{e}_x + a^y \mathbf{e}_y - a^z \mathbf{e}_z$$

$$\text{Reflect in } \mathbf{e}_z = -a^x \mathbf{e}_x - a^y \mathbf{e}_y + a^z \mathbf{e}_z$$

$$c \text{ reflect in } xy = -c^w \mathbf{e}_w + c^x \mathbf{e}_x + c^y \mathbf{e}_y - c^z \mathbf{e}_z$$

$$c \text{ reflect in } xyz = -c^w \mathbf{e}_w + c^x \mathbf{e}_x + c^y \mathbf{e}_y + c^z \mathbf{e}_z$$

$$wx \text{ reflect in } yz = \mathbf{e}_w \wedge \mathbf{e}_x$$

$$wx \text{ reflect in } xy = -\mathbf{e}_w \wedge \mathbf{e}_x$$