

Error Propagation

$$z = a + b(\pm SD_b) \quad SD_z = SD_b$$

$$z = a(\pm SD_a) + b(\pm SD_b) \quad SD_z = \sqrt{(SD_a)^2 + (SD_b)^2}$$

$$z = a - b(\pm SD_b) \quad SD_z = SD_b$$

$$z = a(\pm SD_a) - b \quad SD_z = SD_a$$

$$z = a(\pm SD_a) - b(\pm SD_b) \quad SD_z = \sqrt{(SD_a)^2 + (SD_b)^2}$$

$$z = a * b(\pm SD_b) \quad SD_z = a * SD_b$$

$$z = a(\pm SD_a) * b(\pm SD_b) \quad SD_z = (a * b) \sqrt{\left(\frac{SD_a}{a}\right)^2 + \left(\frac{SD_b}{b}\right)^2}$$

$$z = \frac{a(\pm SD_a)}{b} \quad SD_z = \frac{SD_a}{b}$$

$$z = \frac{a}{b(\pm SD_b)} \quad SD_z = \frac{a * SD_b}{b^2}$$

$$z = \frac{a(\pm SD_a)}{b(\pm SD_b)} \quad SD_z = \left(\frac{a}{b}\right) \sqrt{\left(\frac{SD_a}{a}\right)^2 + \left(\frac{SD_b}{b}\right)^2}$$