

Step 4edh

~~If greater accuracy - less uncertainty~~

5. length  $115 \cdot 3.281 = \boxed{377.81}$

width  $85 \cdot 3.281 = \boxed{2.8 \cdot 10^2 ft}$

11.  $\frac{\delta A}{A} \cdot 100 = 3$

$\delta A = A \frac{3}{100}$

$\delta A = \frac{3}{100} (65) = 1.95 \text{ kg} \approx \boxed{2.0 \text{ kg}}$

17. a.  $\boxed{3 \text{ sig figs}}$

b.  $\boxed{3 \text{ sig figs}}$

c.  $\boxed{3 \text{ sig figs}}$

27. Area:  $3.955 \cdot 3.050 = 12.06$

Uncertainty:  $0.005 + 0.005 = 0.010$

$\boxed{12.06 \pm 0.010 \text{ m}^2}$

30. [cdc.gov/nchs/data/factsheets/factsheet-nvss.pdf](https://www.cdc.gov/nchs/data/factsheets/factsheet-nvss.pdf) average life expectancy in 2018 is 78.7

Assumed lifetime = 80 years

$\frac{2020 \text{ yrs} / 1 \text{ life}}{80 \text{ yrs} / 1 \text{ life}} = 75.75 \approx \boxed{76 \text{ gen}}$