Chapter 11 § 1
Area of Parallelograms

Definitions:

Base – any side of a parallelogram

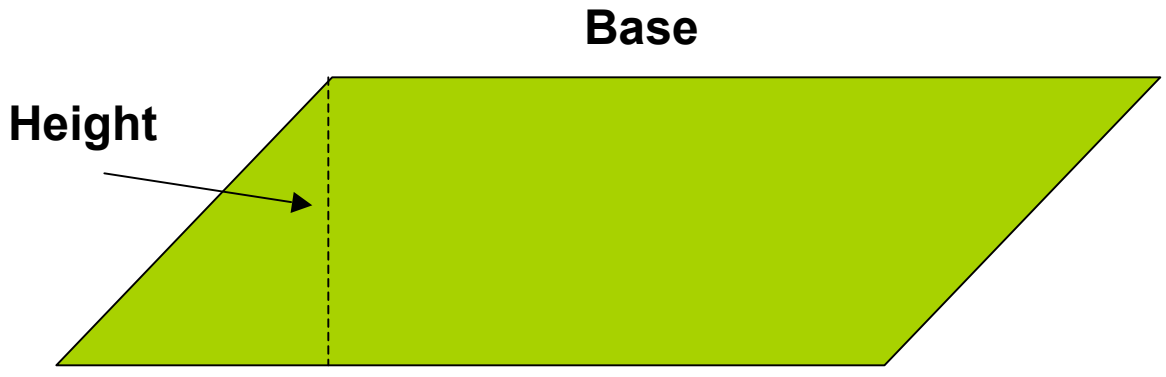
Altitude – the distance between corresponding bases

Height – the length of the altitude.

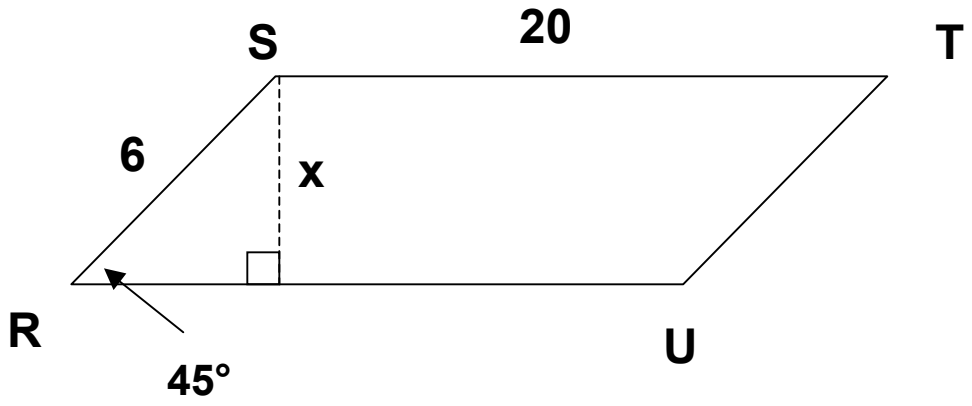
Area – the number of square units contained in the interior of the figure.

Formula:

Area of a Parallelogram – If a parallelogram has an area of A square units, a base of b units, and a height of h units, then A = bh.



Find the area of parallelogram RSTU.



$$6 = x\sqrt{2}$$

$$\frac{6}{\sqrt{2}} = x$$

$$\frac{6}{\sqrt{2}} \cdot \frac{\sqrt{2}}{\sqrt{2}} = x$$

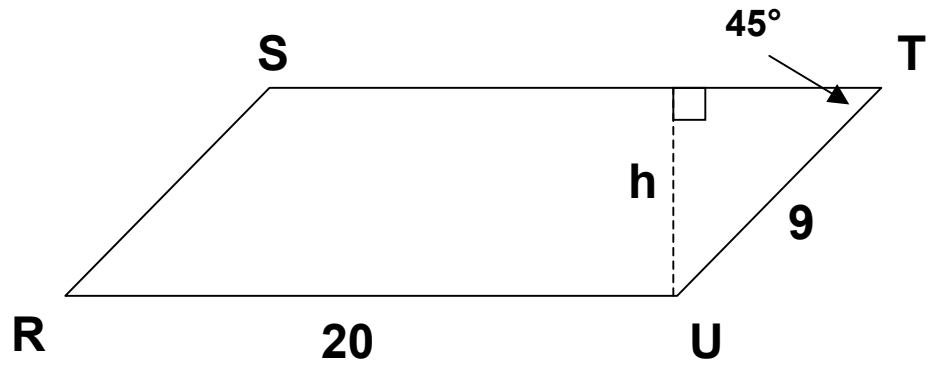
$$3\sqrt{2} = x$$

$$A = bh$$

$$A = (20)\,3\sqrt{2}$$

$$A = 60\sqrt{2}$$

Find the area of Parallelogram RSTU.



$$9 = x\sqrt{2}$$

$$\frac{9}{\sqrt{2}} = x$$

$$\frac{9}{\sqrt{2}} \cdot \frac{\sqrt{2}}{\sqrt{2}} = x$$

$$\frac{9}{2}\sqrt{2} = x$$

$$A = bh$$

$$A = (20)\frac{9}{2}\sqrt{2}$$

$$A = 90\sqrt{2}$$