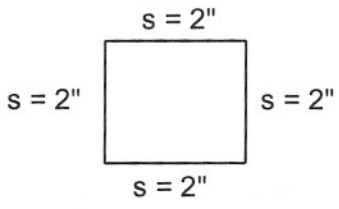
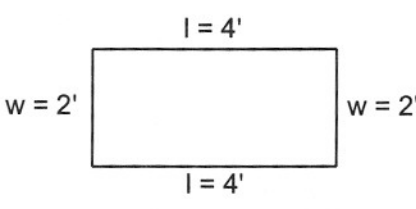
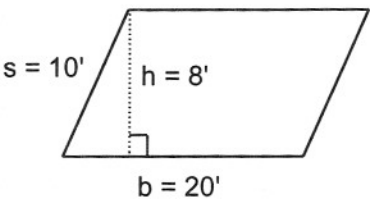
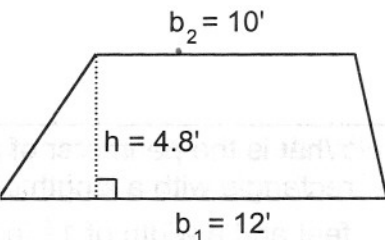
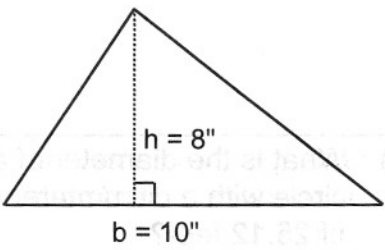
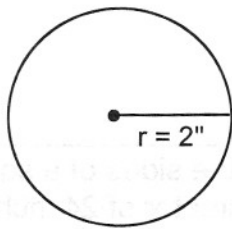


Unit 34 Measuring Area

1. Area

- A. **Area** refers to the space an object covers.
- B. Important quantities: length (l), width (w), sides (s), radius (r), and height (h) which is the length of a perpendicular line drawn to the base of an object.

2. Examples:

<p style="text-align: center;">Square</p> <p>Unknown: Area</p> <div style="text-align: center;">  </div> <p>Formula:</p> $ \begin{aligned} A &= ss = s^2 \\ &= (2)(2) \\ &= 4 \text{ square inches} \end{aligned} $	<p style="text-align: center;">Rectangle</p> <p>Unknown: Area</p> <div style="text-align: center;">  </div> <p>Formula:</p> $ \begin{aligned} A &= lw \\ &= (4)(2) \\ &= 8 \text{ square feet} \end{aligned} $	<p style="text-align: center;">Parallelogram</p> <p>Unknown: Area</p> <div style="text-align: center;">  </div> <p>Formula:</p> $ \begin{aligned} A &= bh \\ &= (20)(8) \\ &= 160 \text{ square feet} \end{aligned} $
<p style="text-align: center;">Trapezoid</p> <p>Unknown: Area</p> <div style="text-align: center;">  </div> <p>Formula:</p> $ \begin{aligned} A &= \frac{1}{2}(b_1 + b_2)h \\ &= \frac{1}{2}(12 + 10)4.8 \\ &= \frac{1}{2}(22)(4.8) \\ &= 52.8 \text{ square feet} \end{aligned} $	<p style="text-align: center;">Triangle</p> <p>Unknown: Area</p> <div style="text-align: center;">  </div> <p>Formula:</p> $ \begin{aligned} A &= \frac{bh}{2} \\ &= \frac{(10)(8)}{2} \\ &= 10(4) \\ &= 40 \text{ square inches} \end{aligned} $	<p style="text-align: center;">Circle</p> <p>Unknown: Area</p> <div style="text-align: center;">  </div> <p>Formula:</p> $ \begin{aligned} A &= \pi r^2 \\ &\approx (3.14)(2)^2 \\ &\approx (3.14)(4) \\ &\approx 12.56 \text{ square inches} \end{aligned} $ <p>Note: If the diameter is given, divide by 2 to find the radius.</p>