Process at finding the Area Scale Factor
Evaluating the missing area from one of the similar figures.
Example:


$$
\text { Area }=\text { ? }
$$



Area $=16 \mathrm{~m}^{2}$

STEP 1: Identify the Side Length Scale Factor (SLSF)

$$
\begin{aligned}
& S L S F=\frac{\text { Length of side from shape with the mis } \sin g \text { area }}{\text { Length of side from other shape }} \\
& \qquad S L S F=\frac{12}{8}=\frac{3}{2} \quad(\text { Re duce })
\end{aligned}
$$

STEP 2: Identify the Area Scale Factor (ASF)

$$
\begin{aligned}
& \text { Area Scale Factor }=(S L S F)^{2}=\left(\frac{3}{2}\right)^{2}=\frac{9}{4} \\
& \qquad A S F=\frac{9}{4}
\end{aligned}
$$

STEP 3: Set-up a proportion to find the missing area and then solve ( $x=$ the missing area)

$$
\begin{aligned}
\frac{x}{16} & =\frac{9}{4} \\
4 x & =144 \\
\frac{4 x}{4} & =\frac{144}{4} \\
x & =36 m^{2}
\end{aligned}
$$

So the missing area is $\mathbf{3 6} \mathbf{~ m}^{\mathbf{2}}$

Evaluating the missing area from one of the similar figures.
Example:


STEP 1: Identify the Side Length Scale Factor (SLSF)

$$
\begin{gathered}
S L S F=\frac{\text { Length of side from shape with the mis } \sin g \text { area }}{\text { Length of side from other shape }} \\
S L S F=\square=\square \quad(\operatorname{Re} \text { duce })
\end{gathered}
$$

STEP 2: Identify the Area Scale Factor (ASF)

$$
\text { Area Scale Factor }=(S L S F)^{2}=(\square)^{2}=\square
$$

$$
A S F=
$$

STEP 3: Set-up a proportion to find the missing area and then solve ( $x=$ the missing area)

$$
x=
$$

So the missing area is

