## Unit 3 Lesson 1: Scale Drawings

### 1 Is That the Same Hippo? (Warm up)

#### Student Task Statement



Diego took a picture of a hippo and then edited it. Which is the distorted image? How can you tell?

Is there anything about the pictures you could measure to test whether there’s been a distortion?

#### Activity Synthesis

Scale factor is 2 or $\frac{1}{2}$



### 2 Sketching Stretching

#### Student Task Statement

A **dilation** with center $O$ and positive **scale factor** $r$ takes a point $P$ along the ray $OP$ to another point whose distance is $r$ times farther away from $O$ than $P$ is. If $r$ is less than 1 then the new point is really closer to $O$, not farther away.

1. Dilate $H$ using $C$ as the center and a scale factor of 3. $H$ is 40 mm from $C$.
* 
1. Dilate $K$ using $O$ as the center and a scale factor of $\frac{3}{4}$. $K$ is 40 mm from $O$.
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#### Activity Synthesis





### 3 Mini Me

#### Student Task Statement

1. Dilate the figure using center $P$ and scale factor $\frac{1}{2}$.
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*
1. What do you notice? What do you wonder?

#### Images for Activity Synthesis

$PA^{′}=k⋅PA$





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