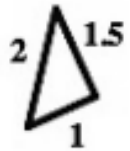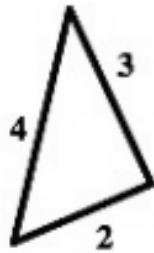Give the factor by which each pre-image was multiplied to create the image. Use the scale factor to fill in any missing side lengths.

1.

2 1.5
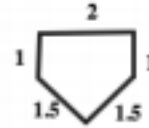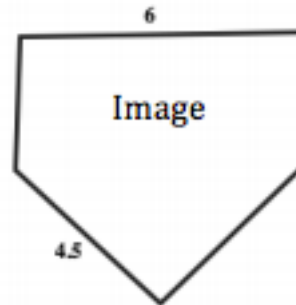
1
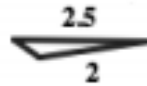
Pre-image

3

4

2

Image

2.

2

1 1

1.5 1.5

Pre-image

6

Image

4.5

3.

2.5

2

Image

Pre-image

2

8

4.

1.5

4

4

Pre-image

2.25

6

Image

5.

Image

10

3.5

Pre-Image

2 2
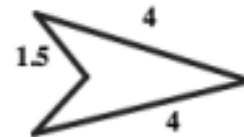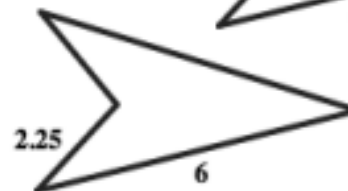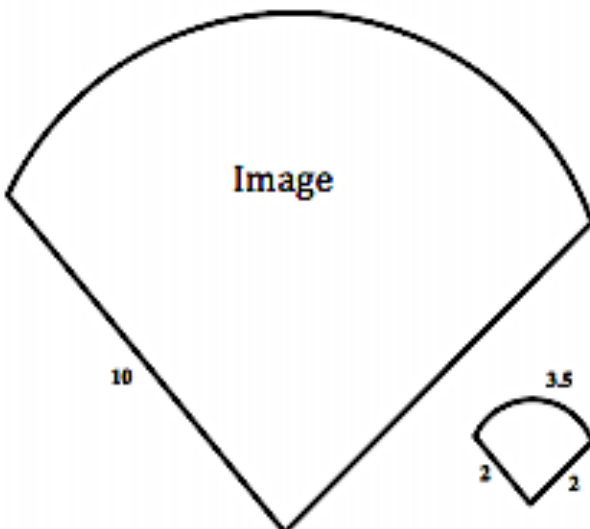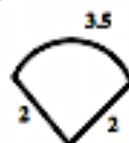
6.

Image: Large Triangle

9

3

Pre-Image:
Small Triangle

4

12

For each scenario, determine where the center of dilation would be.
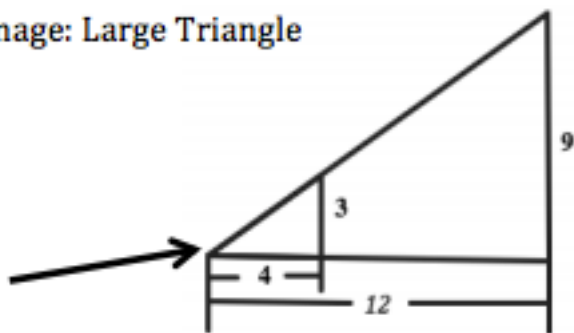
7. Fran walks backward to a distance that will allow her family to all show up in the photo she is about to take.	8. The theatre technician plays with the zoom in and out buttons in effort to fill the entire movie screen with the image.
9. A digital animator creates artistic works on her computer. She is currently doing an animation that has several telephone poles along a street that goes off into the distance.	10. A copy machine is set at 300% for making a photo copy.

Answers:

1. $S.F. = 2$

3. $S.F. = \dfrac{1}{4}$

side lengths : $\dfrac{1}{2}, 10$

5. $S.F. = 5$

side lengths : $10, 17.5$

6. $S.F. = 3$

side lengths : $5, 15$

7. Center of dilation : middle of her family

9. Center of dilation : end of street in the distance