

Name _____ Per _____

LO: I can describe the qualities of scale drawings and explain why they are useful.

DO NOW On the back of this packet

(1) **Need to Know:** When a figure is drawn _____ it means that all lengths change by the same **scale factor** or multiplier. _____ is another word that means “change by the same scale factor.”

(2) **What does “to scale” look like?**

(a) Does the left or the right funhouse mirror show us an accurate picture of what this boy looks like? Explain your choice.



(b) Anyone who uses “pinch to zoom” on a phone or tablet is working with images that are **to scale** or **proportional**. The top image of Spongebob and his friends is on your phone and you “pinch to zoom” to make the image larger. Describe why or why not each of the 3 pictures below could be the result of your “pinch to zoom” action.



ORIGINAL IMAGE ON PHONE



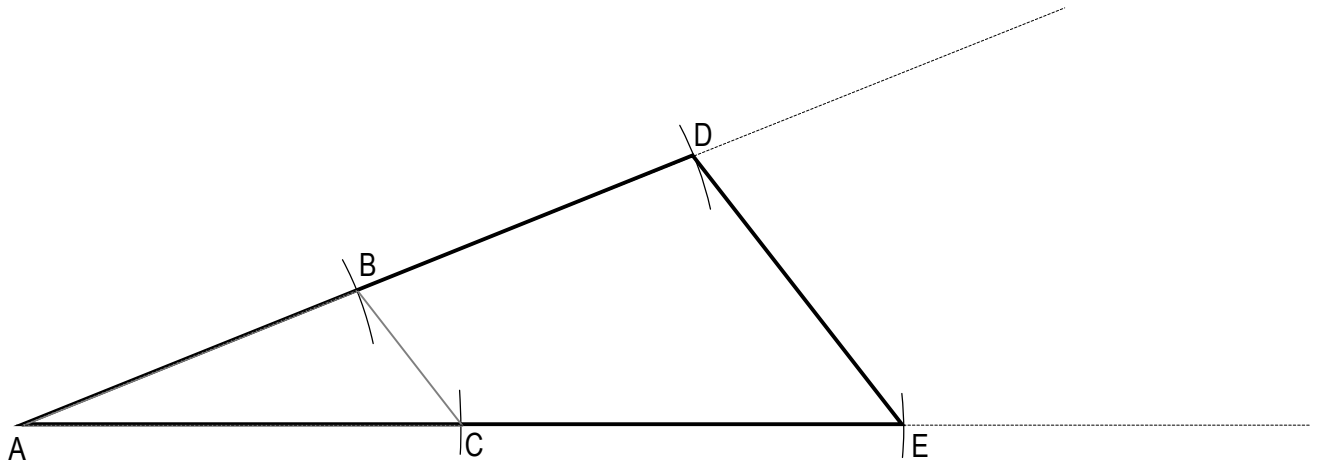




(3) **How can we construct a scale drawing?**

compass,
straightedge

(a) Lavashia claims that she has constructed a **scale drawing** of triangle ABC and labeled it ADE.



Use your compass and straightedge to compare the side lengths of triangle ADE and ABC.

AD is _____ as long as AB

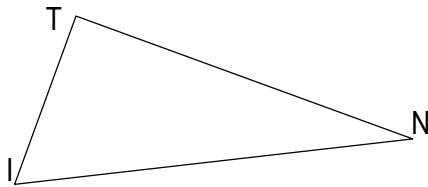
AE is _____ as long as AC

DE is _____ as long as BC

Lavashia *has/has not* (circle one) constructed a **scale drawing** of triangle ABC and labeled it ADE because

Lavashia constructed her scale drawing by using a **scale factor** of _____.

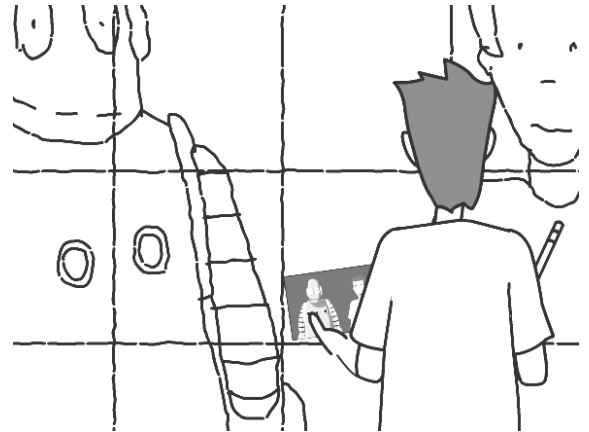
(b) Use a scale factor of 3 ($r = 3$) and Lavashia's method to construct a scale drawing of triangle TIN and label it TOP. (Hint: Start by extending rays TI and TN.)



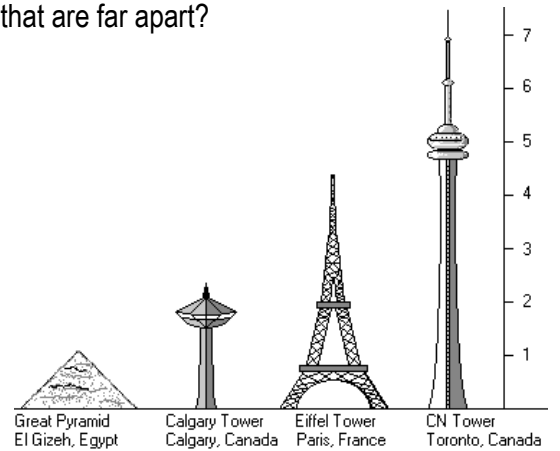
(4) **How are scale drawings useful?**

Use each picture to answer each question in a sentence.

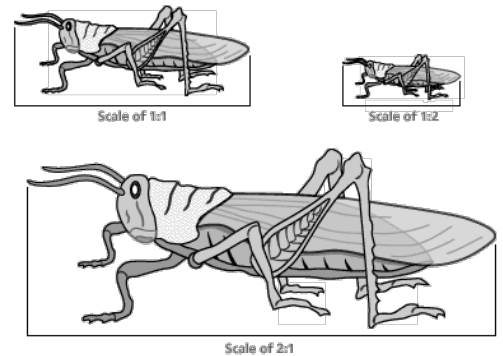
(a) How do scale drawings help people make murals?



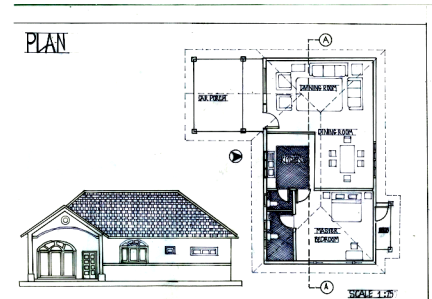
(b) How do scale drawings help people compare large objects that are far apart?



(c) How do scale drawings help people learn about objects that are not always practical to have on hand?



(d) How do scale drawings help people plan large projects?

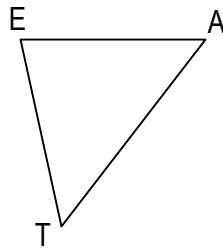


(5) **Exit Ticket**
ON THE LAST PAGE

(6) **Homework**

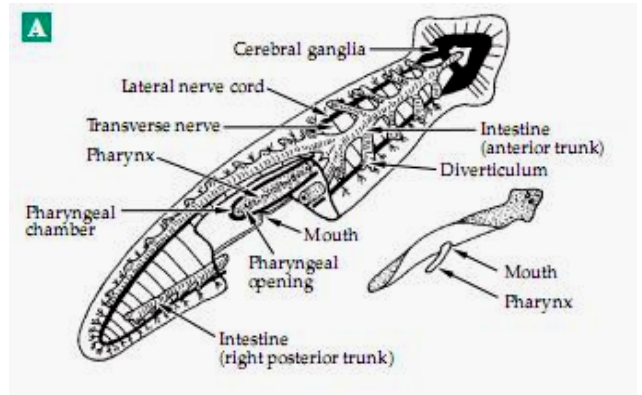
compass,
straight
edge

(a) Construct a scale drawing of triangle EAT using a scale factor of 4 ($r = 4$) and label the drawing E'A'T'



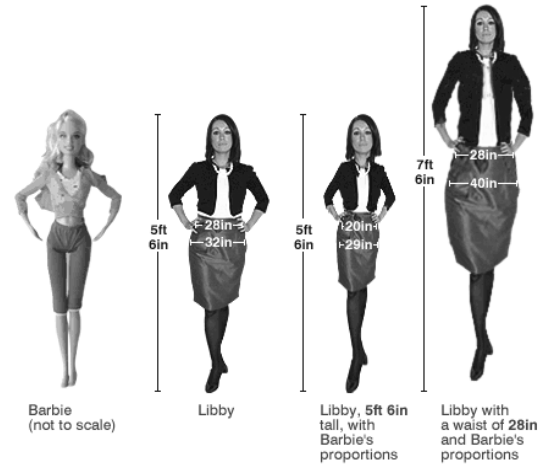
(6) Homework
cont.

(a) How do scale drawings help people study things that are very very small?



(a) How do scale drawings help people understand the highly unusual shape of Barbie?

HOW WOULD A REAL WOMAN LOOK WITH BARBIE'S PROPORTIONS?



(a) How do scale drawings help people travel?



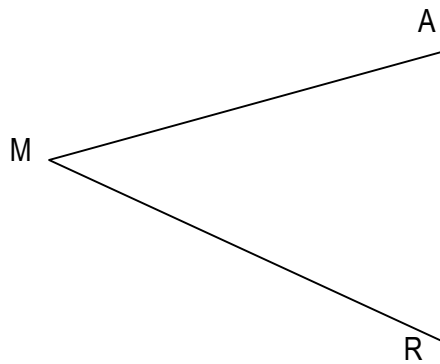
EXIT TICKET

Name _____ Date _____ Per _____

11.1L⁷

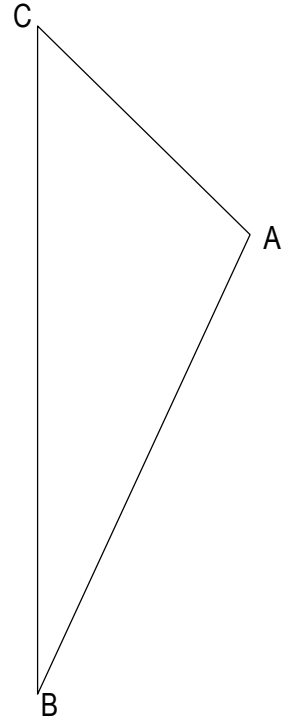
(1) The LO (Learning Outcomes) are written below your name on the front of this packet. Demonstrate your achievement of these outcomes by doing the following:

Use your compass and straightedge to construct a scale drawing of triangle MAR and label it M'A'R'. Use scale factor $r = 2$. Describe what makes M'A'R' a scale drawing.



(1) Construct triangle A'B'C' congruent to triangle ABC. Point A' is drawn for you.

A'



(2) What about this cartoon is supposed to make people smile?

