

Name _____ Period _____ Date _____

Angles and Triangles Culminating Activity

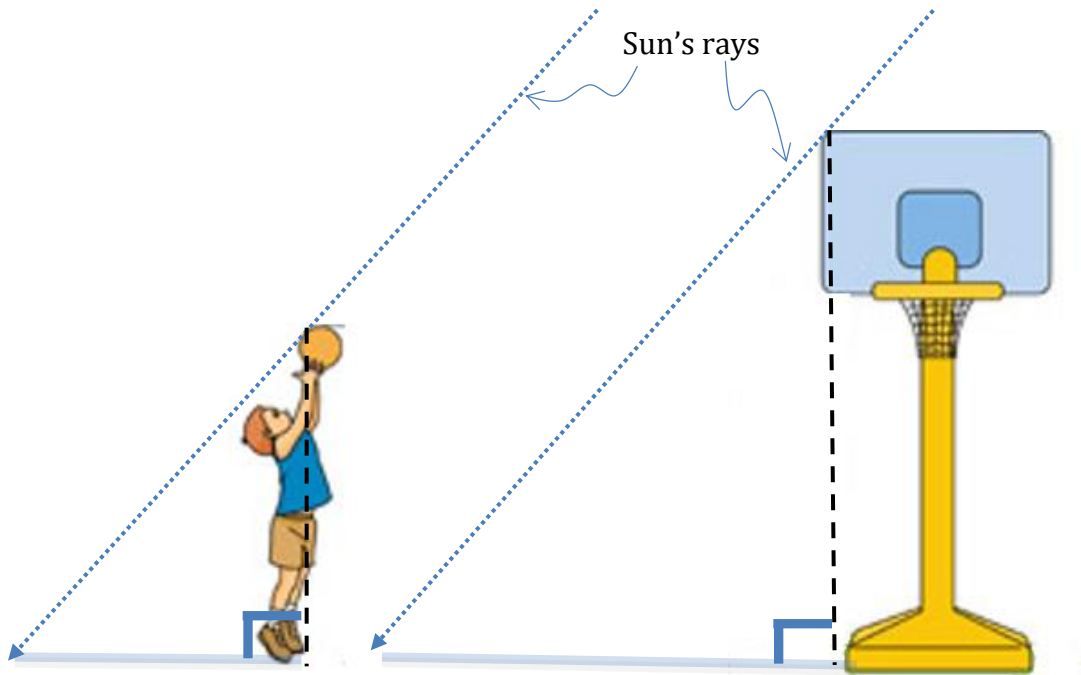
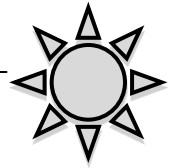


Image modified from classroomclipart.com. Not drawn to scale.

Directions:

Use the figure above to answer the questions. Use mathematical language in your explanations. You may label points, angles, and/or lines on the figure to make your explanations more clear.

1. The Sun's rays that are hitting the Earth are parallel to one another. Is the line defined by the ground a transversal? Why or why not?

Sample answer: Yes. It is a line that is intersecting two other lines.

2. The boy's shadow and the Sun's ray form one angle. The hoop's shadow and the other Sun's ray form another angle. What is the relationship between these two angles? How do you know?

Sample answer: They are corresponding angles because they are in the same position relative to both parallel lines and the transversal. They are congruent because all corresponding angles are congruent.

3. Is the triangle formed by the boy, his shadow, and the Sun's ray similar to the triangle formed by the hoop, its shadow, and the Sun's ray? Why or why not?

Sample answer: Yes. The angles formed by the rays and the shadows are congruent, as described above. Since the boy and his shadow and the hoop and its shadow are

both perpendicular to the ground, the angles formed are congruent. Since there are two pairs of congruent, corresponding angles, the triangles are similar.