

# Photographs

This problem gives you the chance to:

- use proportion in a real life geometric context

A photographer wants to print a photograph and two smaller copies on the same rectangular sheet of paper. The photograph is 4 inches wide and 6 inches high.

Here are two ways he could do it. (Note: the diagrams are not drawn to actual size.)

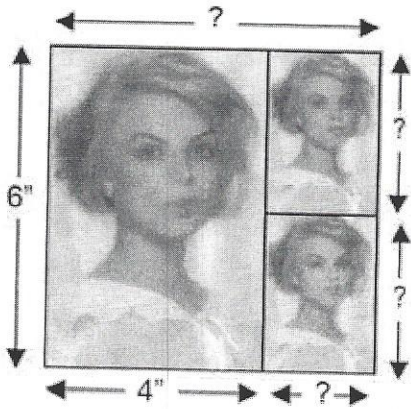


Diagram 1

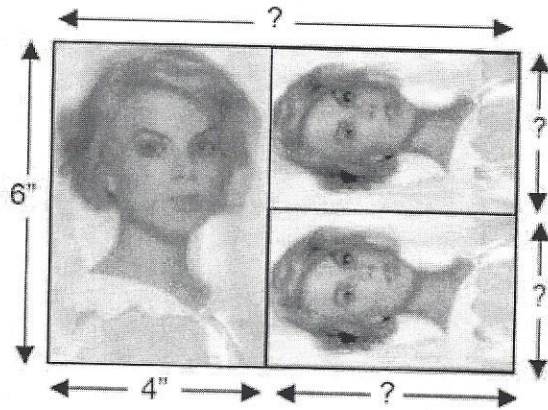


Diagram 2

1. Find the measurements of the small photographs for each arrangement. Show your calculations and explain how you figured it out.

Diagram 1

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Diagram 2

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2. Find the size of the sheet of paper for each arrangement.

Diagram 1

The measurements of the sheet of paper are \_\_\_\_\_ wide and \_\_\_\_\_ high.

Diagram 2

The measurements of the sheet of paper are \_\_\_\_\_ wide and \_\_\_\_\_ high.

Photographs	Rubric	
<p>The core elements of performance required by this task are:</p> <ul style="list-style-type: none"> <li>• use proportion in a real life geometric context</li> </ul> <p>Based on these, credit for specific aspects of performance should be assigned as follows</p>	points	section points
<p>1. Diagram 1: The height of the smaller copy = <math>1/2</math> of 6 inches = <b>3</b> inches</p> <p>Uses proportional reasoning correctly: Height/width = <math>6/4 = 3/\text{width}</math> <b>or</b> Size of photo/Size of copy = <math>6/3 = 4/\text{width}</math> Width = <b>2</b> inches Accept verbal reference to scaling if answer correct.</p> <p>Diagram 2: The width of the smaller copy = <math>1/2</math> of 6 inches = <b>3</b> inches</p> <p>Uses proportional reasoning correctly: Height/width = <math>6/4 = \text{height}/3</math> Height = <del>6</del> inches <b>5</b> Accept verbal reference to scaling if answer correct.</p>	<p>1</p> <p>1 1</p> <p>1</p> <p>1 1</p>	<p>6</p>
<p>2. Gives correct answers:</p> <p>Diagram 1: <b>6</b> inches wide, <b>6</b> inches high</p> <p>Diagram 2: <del>8</del> inches wide, <b>6</b> inches high</p>	<p>1</p> <p>1</p>	<p>2</p>
<b>Total Points</b>		<b>8</b>