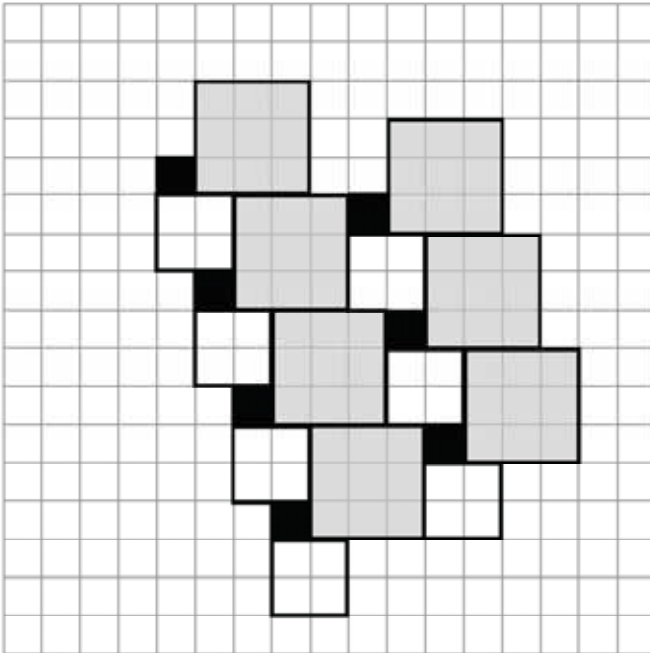


Square Tiles


This problem gives you the chance to:


- recognize and interpret geometric patterns
- work with ratios

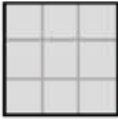
Here is a tile pattern with 3 different sizes of square tiles.



Key

One black tile: 

One white tile: 

One gray tile: 

1. Draw 2 more black tiles, 2 more white tiles and 2 more gray tiles to show how the pattern continues.

2. Imagine the pattern goes on forever.

(a) What is the ratio of the number of black tiles : number of white tiles : number of gray tiles?

_____ : _____ : _____

(b) What is the ratio of the area covered by black tiles : area covered by white tiles : area covered by gray tiles?

_____ : _____ : _____

(c) What fraction of the total area of the pattern is covered by gray tiles? _____

6

Square Tiles	Rubric	
The core elements of performance required by this task are: <ul style="list-style-type: none"> • recognize and interpret geometric patterns • work with ratios Based on these, credit for specific aspects of performance should be assigned as follows	points	section points
1. Draws 6 correct squares: no extra incorrect tiles	1	1
2. (a) Gives correct answer: 1 : 1 : 1 accept n:n:n	1	
(b) Gives correct answer: 1 : 4 : 9 accept multiples	2	
(c) Gives correct answer: $\frac{9}{14}$ accept $\frac{81}{126}$ or 0.642(8)	2	5
Total Points		6

Grade Seven – 2006

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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.)

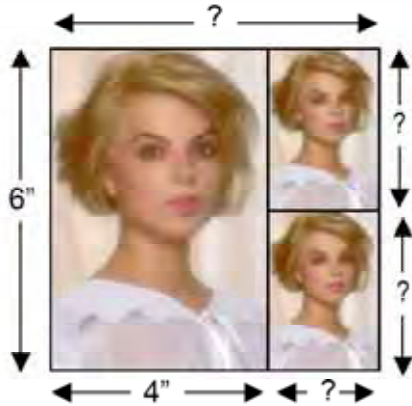


Diagram 1

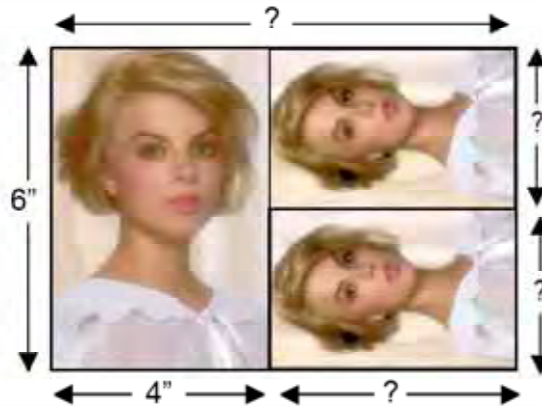


Diagram 2

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

Diagram 1
