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.

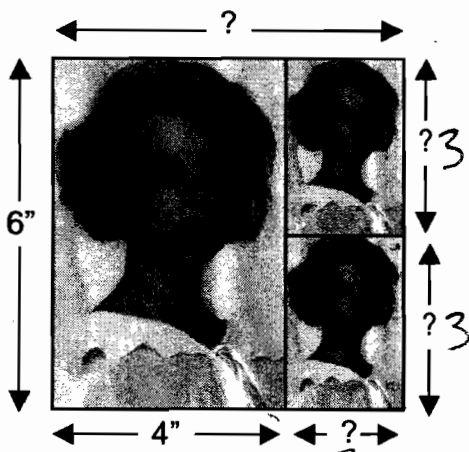Here are two ways he could do it. (Note: the diagrams are not drawn to actual size.)
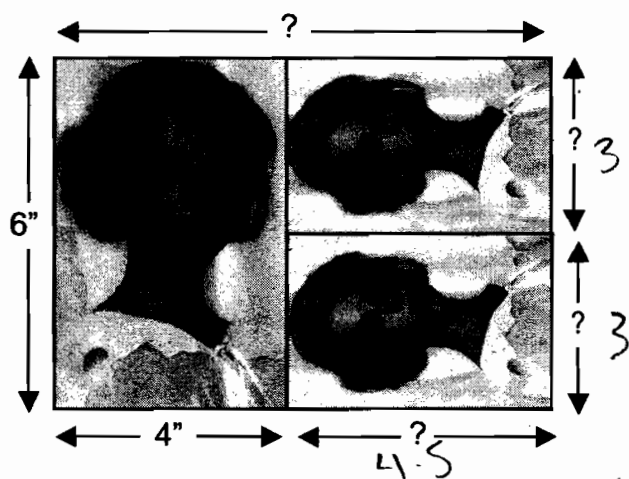

Diagram 1

$$6/3 = {}^4\!/_2$$

Diagram 2

$$\frac{4}{3} = \frac{6}{X}$$

$$\frac{6 \cdot 3 = 4 \cdot X}{4 \qquad 4}$$

$$4.5 = X$$

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

Diagram 1

$6 \div 2 = 3$

For diagram 1 the heigth is 6 for the regular photo so each other one has to be 3 inches high and the smaller photo has a decreasment ratio of about 3/6 so it would be half wide so it is 2 inches wide.

Diagram 2 **T1**

For diagram 2 the heigth for the big picture is 6 so the smaller pictures are 3 inches wide. The decreasment ratio for width is 4/3 so the height would be 4.5 inches. ✓

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

Diagram 1

The measurements of the sheet of paper are ___6___ wide and ___6___ high. ✓

Diagram 2

The measurements of the sheet of paper are ___8.5___ wide and ___6___ high. ✓

8

Photographs

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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.

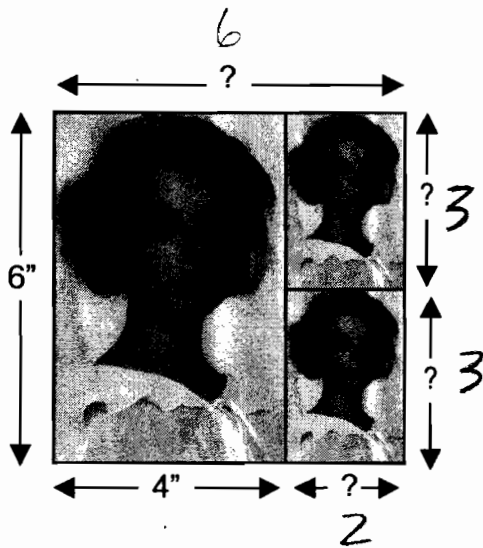Here are two ways he could do it. (Note: the diagrams are not drawn to actual size.)
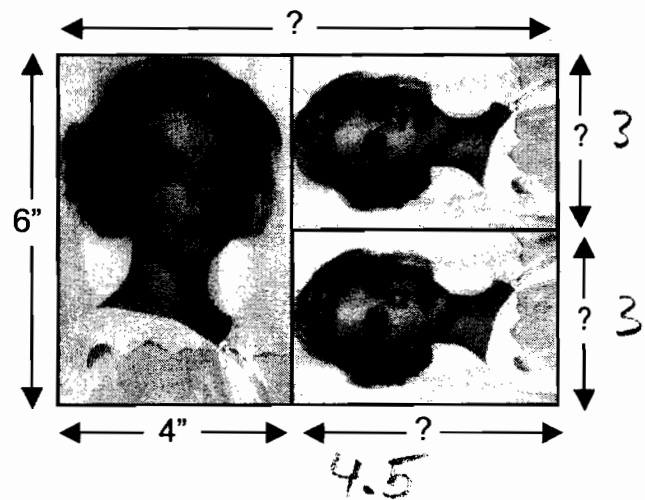

Diagram 1

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

I knew half of 6 is 3
diagram looked square. so it to be 2 wide

1
0
1

T2

Diagram 2

The width of each small photo would be 3"(6÷2) ✓ |

and the height would be 4.5" because in |

order to keep the shapes similar that would

be the dimensions. |

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

Diagram 1 ✓

The measurements of the sheet of paper are ___6"___ wide and ___6"___ high. |

Diagram 2 ✓

The measurements of the sheet of paper are ___8.5"___ wide and ___6"___ high. |

8 ⑦

Photographs

This problem gives you the chance to:
• use proportion in a real life geometric context

T3

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.)
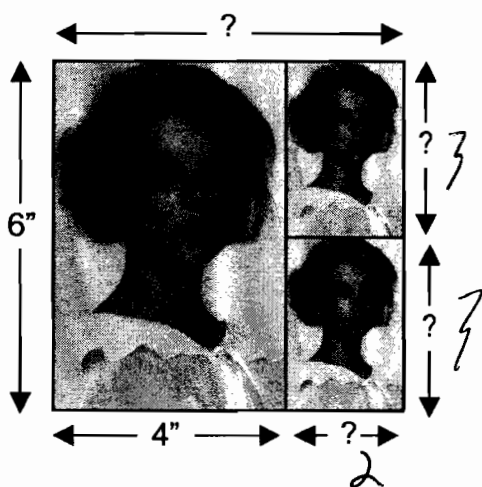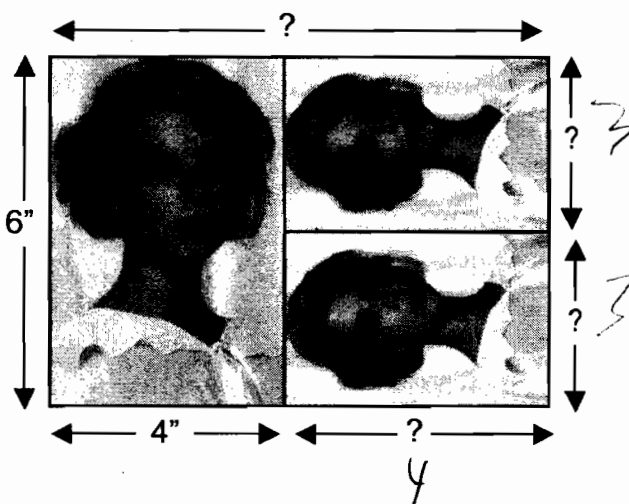

Diagram 1

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

I did scale factoring first I did
half of 6 ✓ for the sides + half
of 4 for the bottom ✓

Diagram 2

T3

I did scale factoring ✓ 1

I did half of 6 for the ✓

side. + half of 8 for 𝜕

the botton. ✗ 𝒪

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

Diagram 1

✓

The measurements of the sheet of paper are ___6___ wide and ___6___ high.   1

Diagram 2

✗

The measurements of the sheet of paper are ___8___ wide and ___6___ high.   𝒪

8 ⑤

Photographs   Test 7

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.

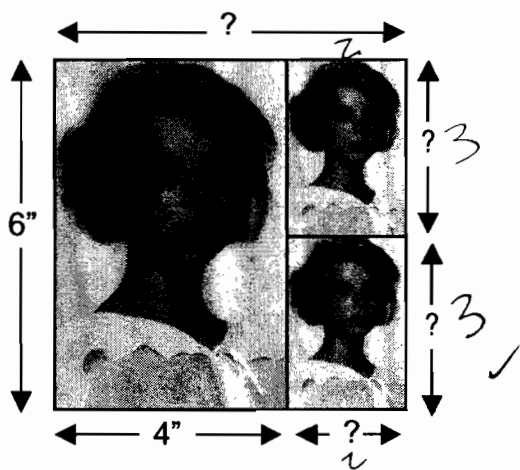Here are two ways he could do it. (Note: the diagrams are not drawn to actual size.)

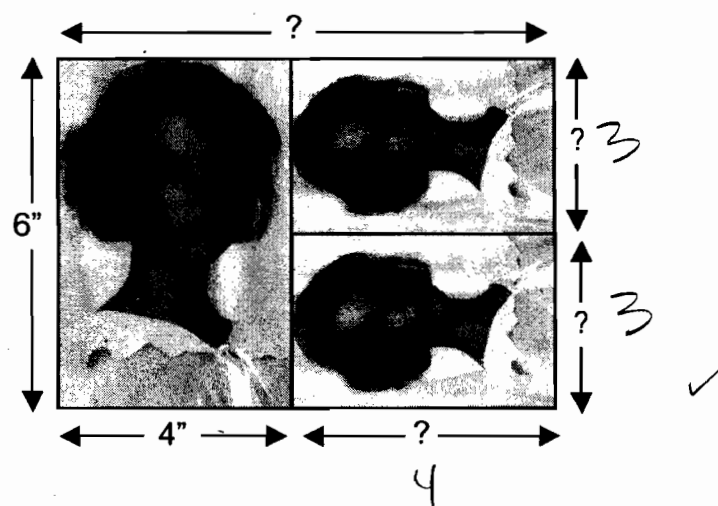**Diagram 1**   **Diagram 2**

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

   Diagram 1

   > The smaller photos are 2" by 3" because two of them fit into the 6" side, making one side 3". The full 3 photos is a square, so 6ˣ-4=②. 2" for the other side of the small photos.

Diagram 2

T4

3" by 4" I know that the width has to be / 1
3 because it is haf of the other side, The   0
hieath looked about the same as the   0
width of the ~~to~~ lauger photo, so that side
is   4".

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

Diagram 1

The measurements of the sheet of paper are ___6"___ wide and ___6"___ high.   1

Diagram 2

The measurements of the sheet of paper are ___8"___ × wide and ___6"___ high.   0

8 ④

Photographs

This problem gives you the chance to:
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T5

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.)
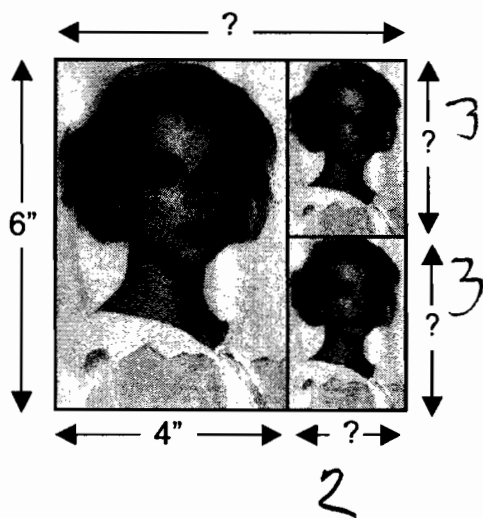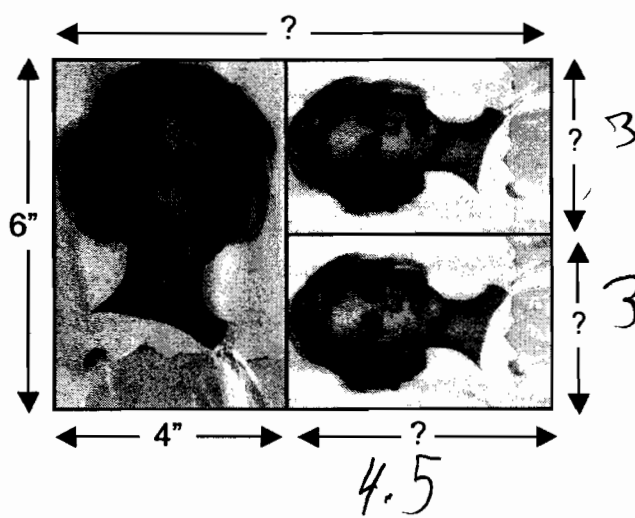

Diagram 1

(handwritten under Diagram 1 small width: 2)

(handwritten beside small photos: 3 and 3)

Diagram 2

(handwritten under Diagram 2 small width: 4.5)

(handwritten beside small photos: 3 and 3)

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

Diagram 1

$6 \div 2 = 3$ $\qquad$ $4 \div 2 = 2$, $\qquad$ $3 \times 2 = 6$,
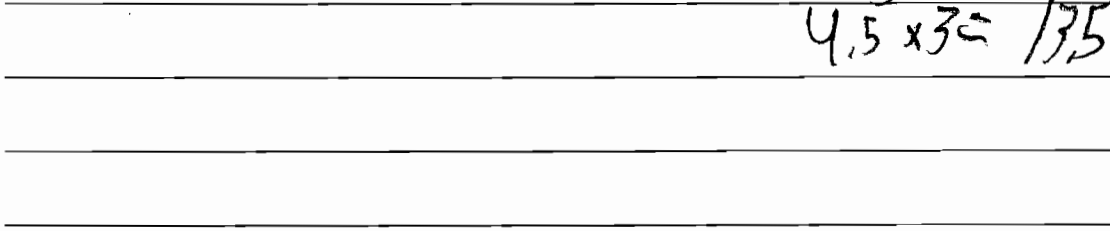
Diagram 2 $6 \div 2 = 3$ ✓

$6\overline{4}\ \overline{1} = 2/3$

$3 = \frac{2}{3}$ $3 \div 2 = 1.5 \times 3 = 45$

$4.5 \times 3 = 13.5$ fw

13.5

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

Diagram 1

The measurements of the sheet of paper are _____ 6" wide and _____ 6" high.

Diagram 2

The measurements of the sheet of paper are _____ 8.5 wide and _____ 6 high.

8

Photographs

This problem gives you the chance to:
• use proportion in a real life geometric context

S1

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.)
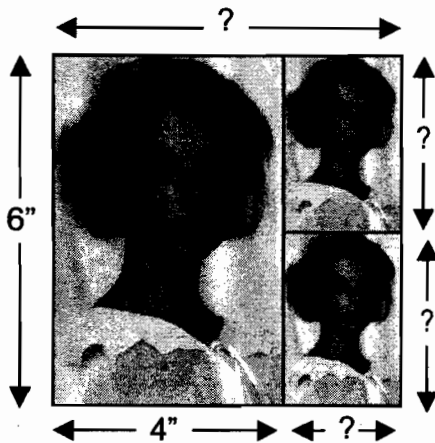

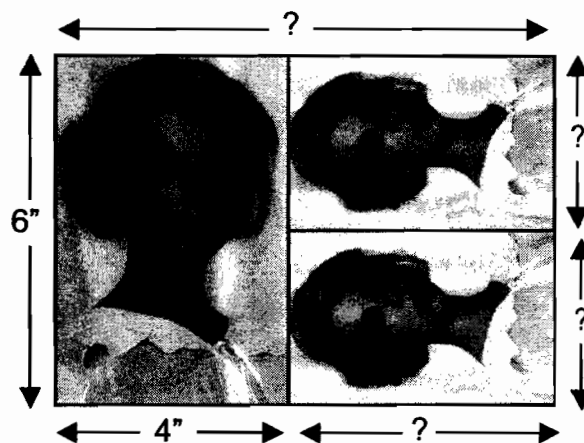**Diagram 1**   **Diagram 2**

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

   Diagram 1

   $\frac{6}{4} = \frac{3}{2}$ ✓, so the measurements for the 2 smaller pictures are 3×2 because their right side is 3", so the only correct proportion would be 3×2.

Diagram 2

Their bases are equal to 6÷2, so they have a base
of 3". The proportion to the first photo is $\frac{6}{4}$, and
$\frac{6}{4} = \frac{x}{3}$. x = 4.5, meaning the small picture's
dimensions are 4.5 × 3.

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

Diagram 1

The measurements of the sheet of paper are ___6 in.___ wide and ___6 in.___ high.

Diagram 2

The measurements of the sheet of paper are ___6 in.___ wide and ___8.5 in.___ high.

8

Photographs

This problem gives you the chance to:
• use proportion in a real life geometric context

S2

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.)
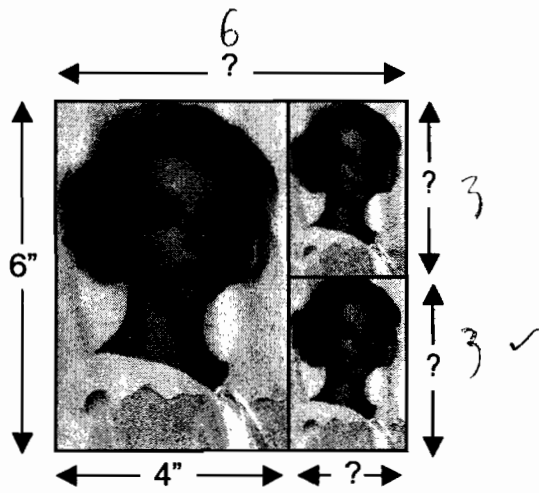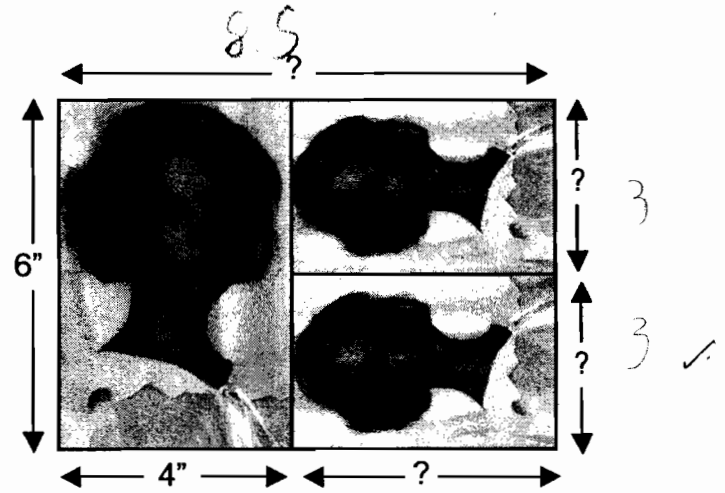

Diagram 1 ✓   **Diagram 2**

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

Diagram 1

I used Scale factor

Diagram 2

I used scale factor

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

Diagram 1

The measurements of the sheet of paper are ___6___ wide and ___6___ high. ✓

Diagram 2

The measurements of the sheet of paper are ___8.5___ wide and ___6___ high. ✓

8

⑧

Page 3   Photographs   Test 7

Photographs

This problem gives you the chance to:
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S3

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.)
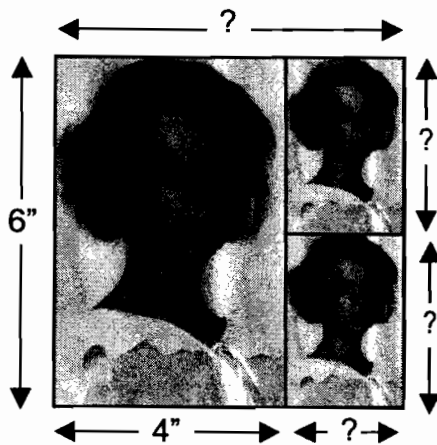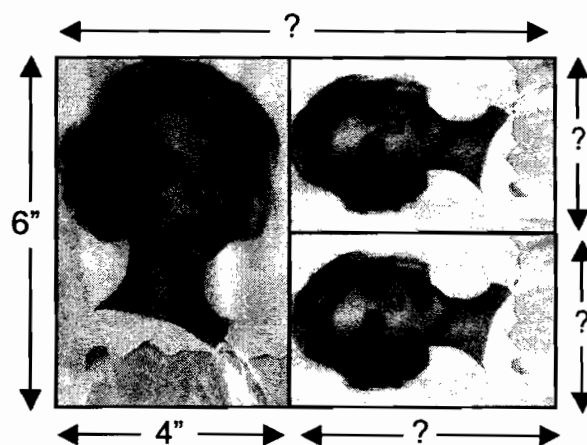
Diagram 1

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

1 side of the large photo is 6 so the other
side has to be 6 ÷ 2 = 3 each, the other
side of the photo is 4 + it is cut in
half on the other pic, so it is 2
The small pic is a 3×2

Diagram 2

The long side is 6 so the other side is
6, but 2 pics, so 6÷2=3 The other
Side os is 4, + it is the same as
the small pic. So the small pic is
4×3

1
✓
0
0

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

Diagram 1

The measurements of the sheet of paper are ____6____ wide and ____6____ high.

✓
1

Diagram 2

The measurements of the sheet of paper are ____8____ wide and ____6____ high.

×
0

8 | ⑤

Photographs

This problem gives you the chance to:
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S4

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.)
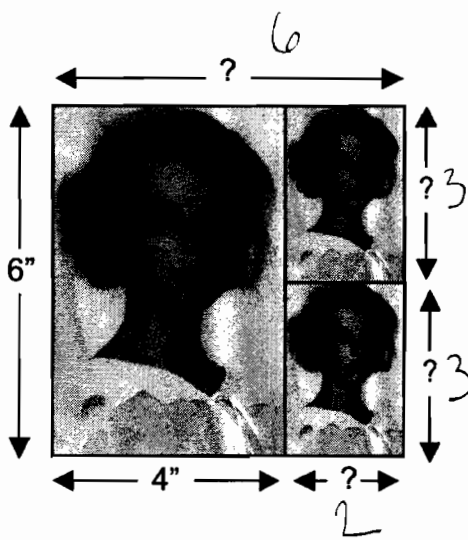
6

? 3

6"

← 4" → ← ?→
2
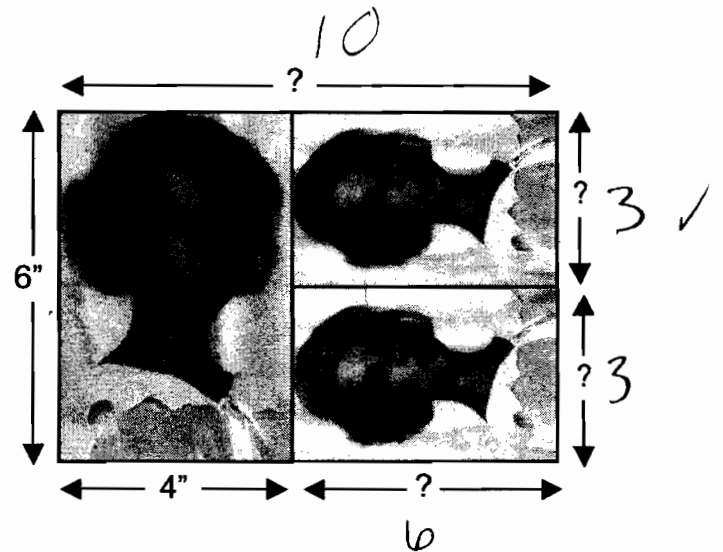
Diagram 1

10

? 3 ✓

6"

? 3

← 4" → ← ? →
6

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

Is a square so it would be 6 inches around
If there is 4 on the bottom you need 2 more   ʌ
tops just 6 and the smaller pictures
are 3 because they are half of 6

1
0

1

Diagram 2   ✗

The top side is 10 because the smaller   1

pictures in Diagram 1 are 3x smaller   0

than in Diagram 2.   0

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

Diagram 1

The measurements of the sheet of paper are ____6____ wide and ____6____ high.   ✓   1

Diagram 2   ✗

The measurements of the sheet of paper are ____10____ wide and ____6____ high.   0

8

④

Photographs

This problem gives you the chance to:
• use proportion in a real life geometric context

S5

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.)
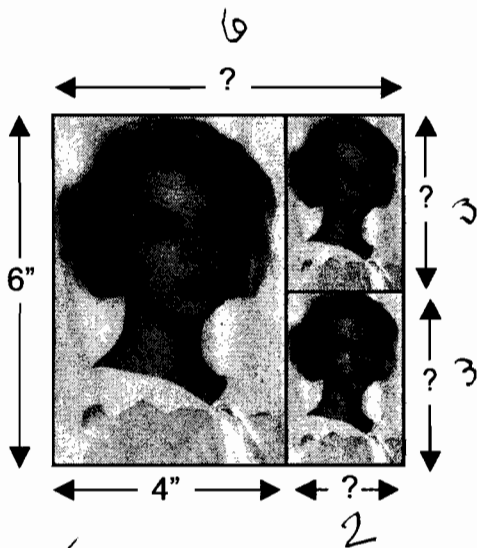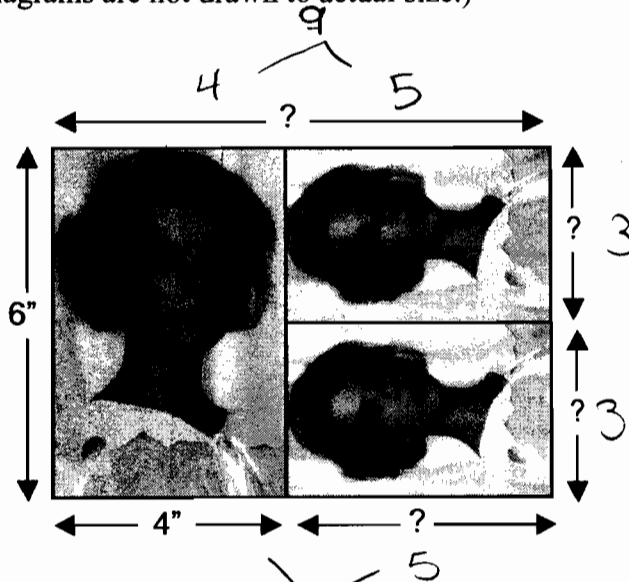

Diagram 1

Diagram 2

$6 \div 2 = 3$ ✓

$6 - 4 = 2$ ✓
X

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

Diagram 1

> If the original hight was 6 inches you would devide that by two for the opposite side. If you subtract the 4 x from the 6 you get 2 for the base. For the top, I would just copie the base.

Diagram 2

✓ <u>If the original hignt was 6" you would</u>
<u>devide the hignt (6") by 2 for the opposite</u>
<u>side. If you know 4 is the width, you</u>
<u>would use that to find it's five. You would</u>
then do the same for the base.

1

0

0

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

Diagram 1

✓ 1

The measurements of the sheet of paper are ___6___ wide and ___6___ high.

Diagram 2

0

The measurements of the sheet of paper are ___10___ ✕ wide and ___6___ high.

Photographs   Test 7

8   4

Photographs

This problem gives you the chance to:
• use proportion in a real life geometric context

S6

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.)
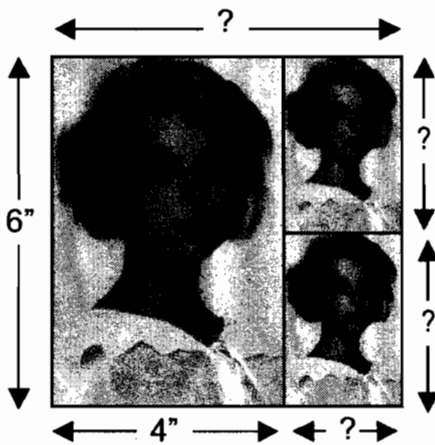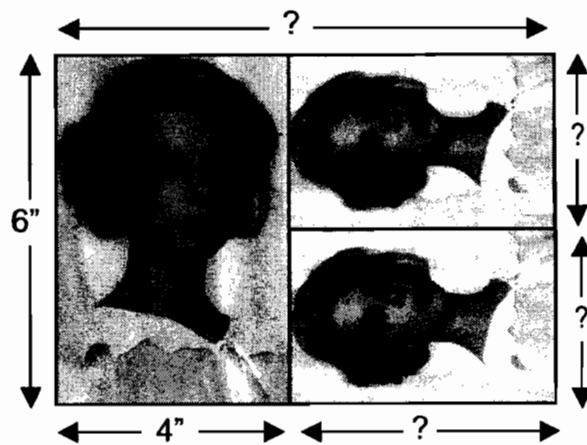

Diagram 1

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 ✓

4÷2=2   2x3   I divides the lengths of the
6÷2=3 ✓ the big photos to find the small
         photos.

Diagram 2

$6 \div 2 = 3$ I took the tall one divided by 4   1

$9 \div 1 = 4$ to the the width of the small photo

$\times$ The length was the width of the   O

           big photo.   O

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

   Diagram 1

   The measurements of the sheet of paper are ___6___ wide and ___6___ high.   1

   Diagram 2

   The measurements of the sheet of paper are ___8___ wide and ___6___ high.   O

8 ⑤

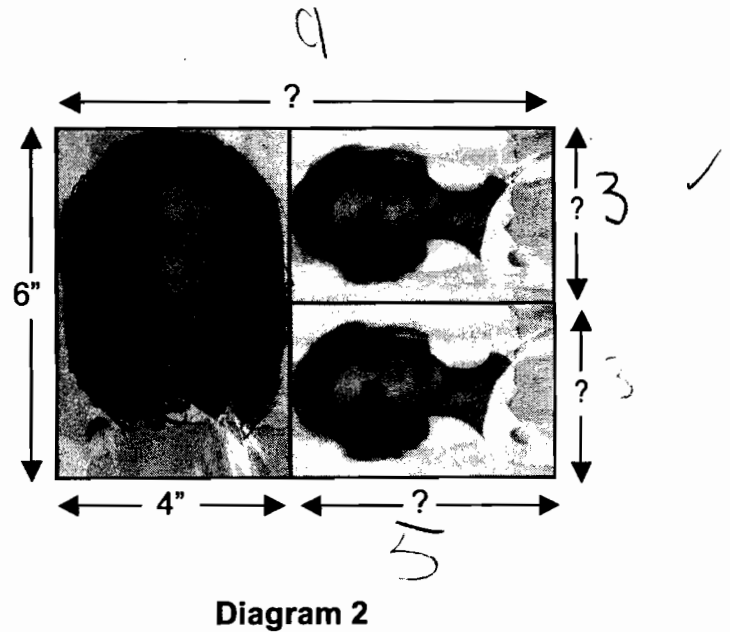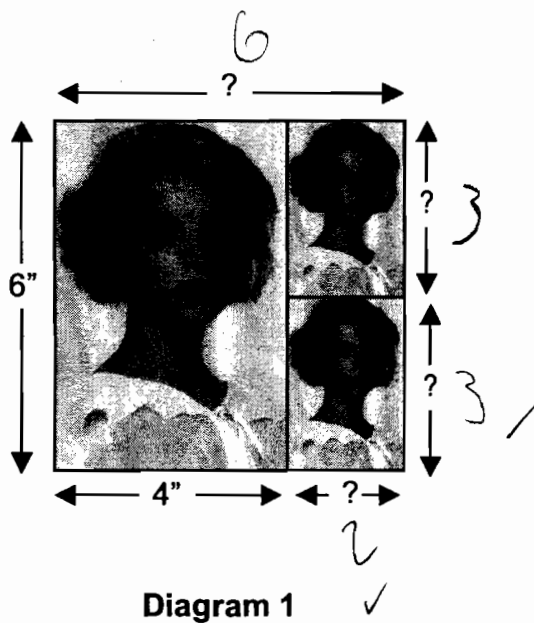Page 3   Photographs   Test 7

Photographs

This problem gives you the chance to:
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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

The diagram is a square so
the sides have to be equal
amounts of space

S7

Diagram 2

I fand that, by using deductive
reasoning and spatial skulls.

1
0
0.

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

Diagram 1

The measurements of the sheet of paper are ___6"___ wide and ___6"___ high.   1

Diagram 2

The measurements of the sheet of paper are ___9"___ wide and ___6"___ high.   0

8 ④

Photographs   Test 7

Photographs

This problem gives you the chance to:
• use proportion in a real life geometric context

S8

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.)
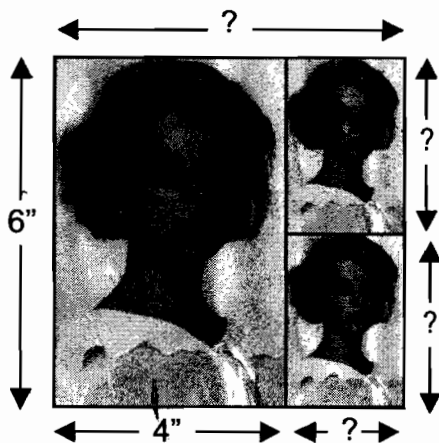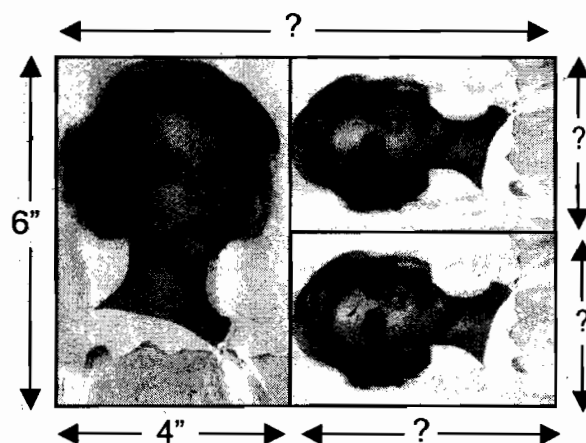

Diagram 1

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

$$6 \div 2 = 3 \qquad 4 \div 2 = 2$$

a 3" ⭥ by ⭤ 2. I found the scale factor by there are 2 tall to the origonal

Diagram 2

$6 - 2 = 3"$ wide b✗

$3 \times 1.5 = 4.5"$ tan

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

Diagram 1

The measurements of the sheet of paper are ___6___ wide and ___6___ high.

Diagram 2

The measurements of the sheet of paper are ___8.5___ wide and ___6___ high.

Photographs

This problem gives you the chance to:
• use proportion in a real life geometric context

S9

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.)
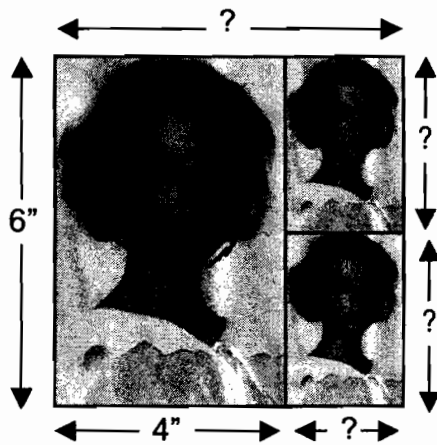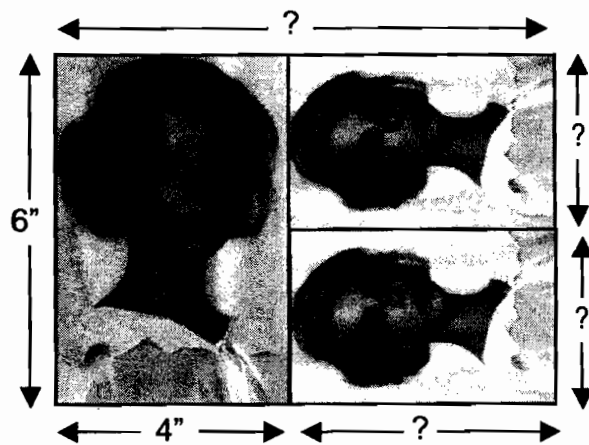

Diagram 1   **Diagram 2**

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

Diagram 1

The measurements of the smaller photographs are 3in high by 2in. wide. You can figure this out by doing a proportion.

Diagram 2   ✗

The sizes for the smaller pictures are 4 in. tall   1

by 3 in. wide.   0

—————   0

$\overset{4}{\cancel{2}}{\Large/}_{6}$ ✓

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

Diagram 1

The measurements of the sheet of paper are ___ 6 in wide and ___ 6 in high.   ✓   1

Diagram 2

$\overset{4}{+4}{\Large/}_{8}$

✗

The measurements of the sheet of paper are ___ 8 in. wide and ___ 6 in. high.   0

8 ⑤

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.

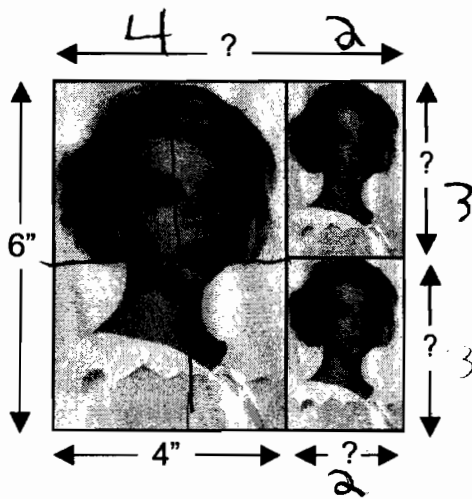Here are two ways he could do it. (Note: the diagrams are not drawn to actual size.)
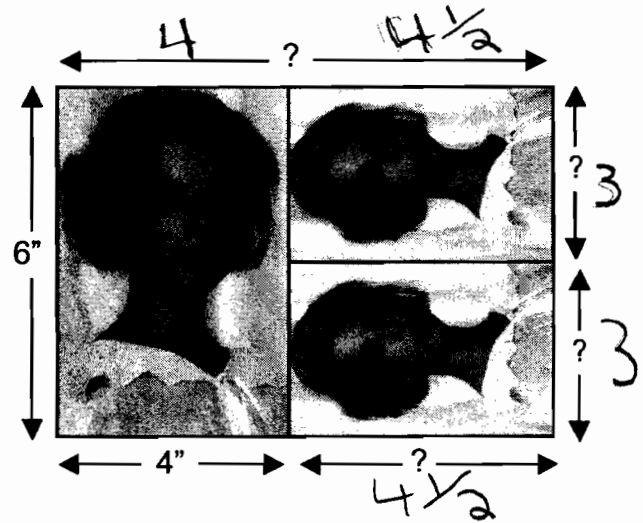

Diagram 1

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

First I find the measurements of each side of each
Photograph by scaling. I then cut the big picture into
4 pieces which meant the smaller pictures would have half
size measurements.

Diagram 2

S10

I had to use scaling proportion methods. My answers are on the other page.

/

/

/

/

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

Diagram 1

The measurements of the sheet of paper are ___6___ wide and ___6___ high. ✓ /

Diagram 2

The measurements of the sheet of paper are ___$8\frac{1}{2}$___ wide and ___6___ high. ✓ /

8 ⑧