3
4
A
B
C
H

$AB^2 + BC^2 = AC^2$
$3^2 + 4^2 = AC^2$
$25 = AC^2$
$AC = \sqrt{25} \approx 5.000$

S

$S = \frac{AB \times BC}{2}$
$S = \frac{3 \times 4}{2}$
$S = 6$

$S = \frac{BH \times AC}{2}$

$S = \frac{BH \times AC}{2}$
$6 = \frac{BH \times 5.000}{2}$
$2 \times 6 = BH \times 5.000$
$\frac{2 \times 6}{5.000} = BH$
$BH \approx 2.40$

Partie A : Première modélisation

- 90
- 130

300

n
(u_n)
$u_1 =$
3
$n1, u_{n+1} =$
$0.9u_n +$
1.3
u_2
u_3
$u_2 =$
$0.9 \times$
$u_1 +$
$1.3 =$
$0.9 \times$
$3 +$
$1.3 =$
4
$u_3 =$
$0.9 \times$
$u_2 +$
$1.3 =$
$0.9 \times$
$4 +$
$1.3 =$
4.9
412
400
490
$n1$
$u_n = 13 - 1009 \times 0.9^n.$

$u_n =$
$13 -$
$1009 \times$
0.9^n
$n1$

- **Initialisation**

$n =$