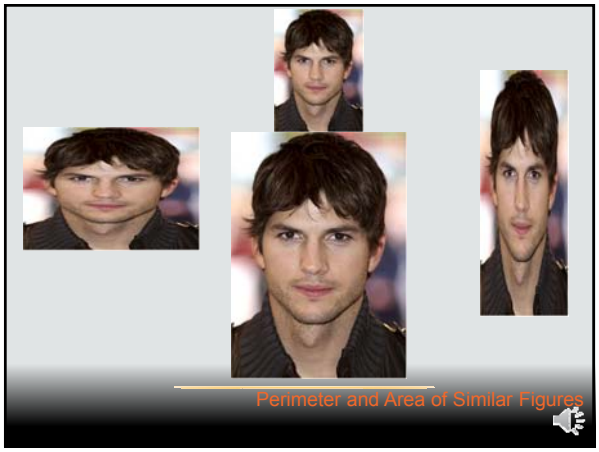
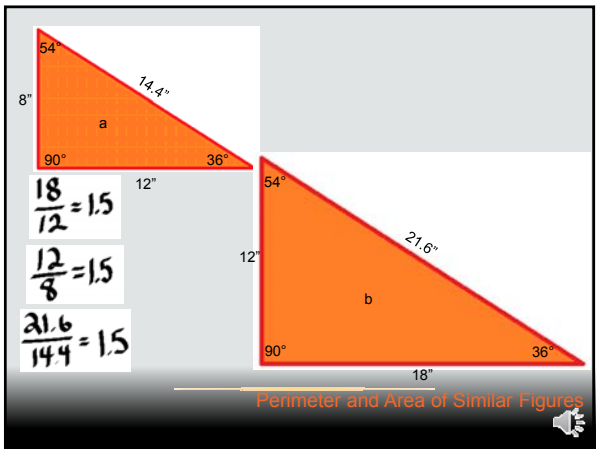
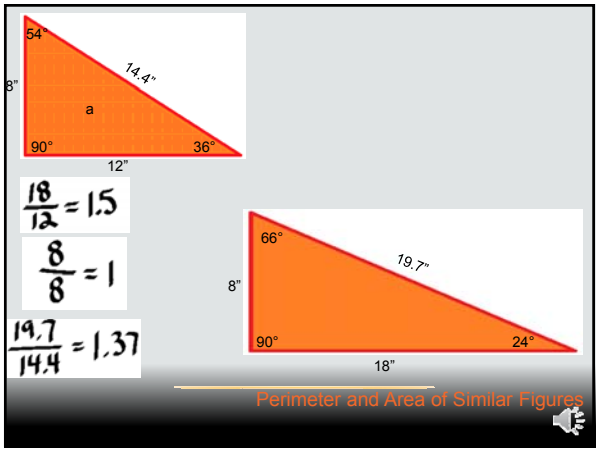
MasterMath

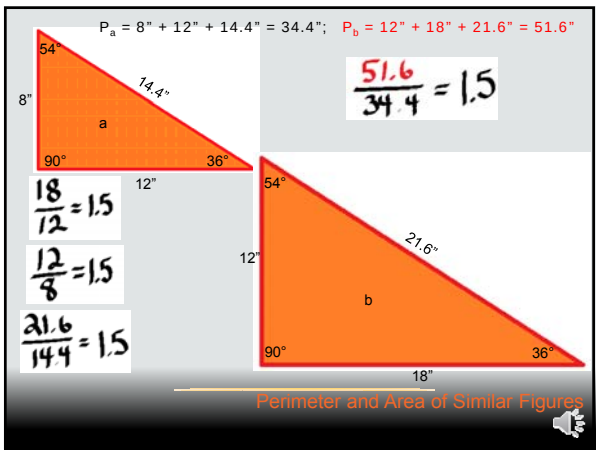
NUMBER SENSE

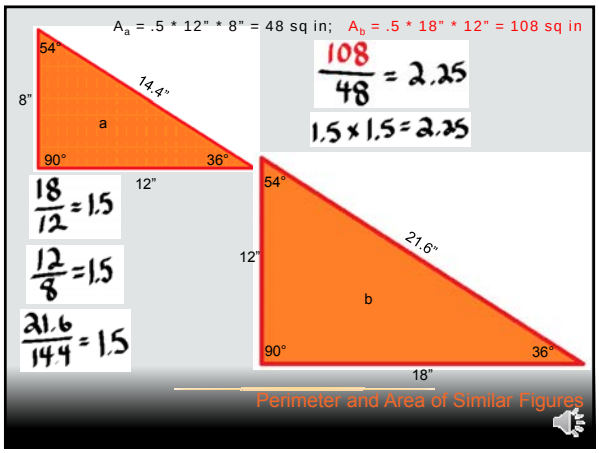
Perimeter and Area of Similar Figures

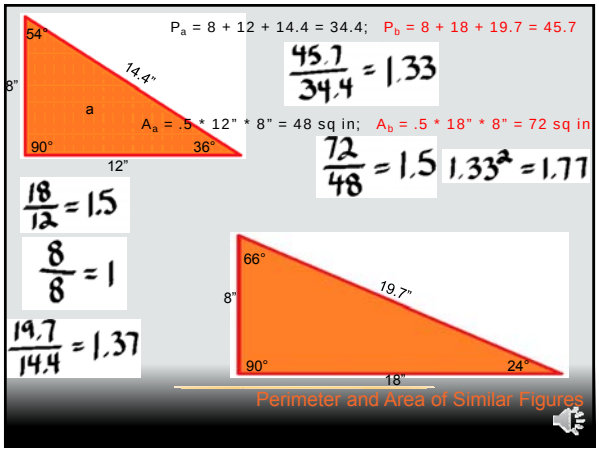


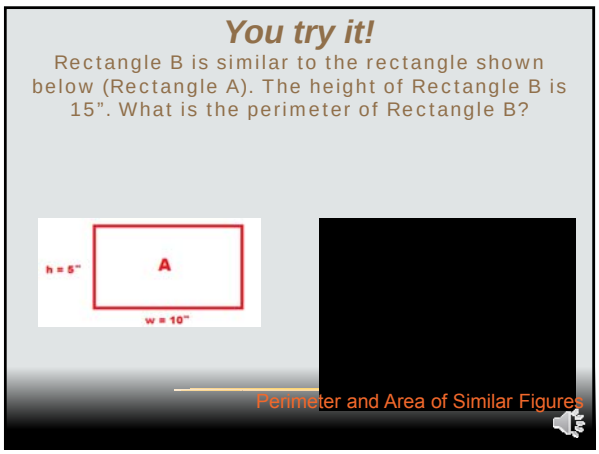

54°
14.4"
8"
a
90°
36°
12"
18/12 = 1.5
12/8 = 1.5
21.6/14.4 = 1.5
54°
21.6"
12"
b
90°
36°
18"
Perimeter and Area of Similar Figures


54°
14.4"
8"
a
90°
36°
12"
18/12 = 1.5
8/8 = 1
19.7/14.4 = 1.37
66°
19.7"
8"
90°
24°
18"
Perimeter and Area of Similar Figures


P_a = 8" + 12" + 14.4" = 34.4"; P_b = 12" + 18" + 21.6" = 51.6"
51.6/34.4 = 1.5
54°
14.4"
8"
a
90°
36°
12"
18/12 = 1.5
12/8 = 1.5
21.6/14.4 = 1.5
54°
21.6"
12"
b
90°
36°
18"
Perimeter and Area of Similar Figures


A_a = .5 * 12" * 8" = 48 sq in; A_b = .5 * 18" * 12" = 108 sq in
54°
14.4"
8"
a
90°
36°
12"
108/48 = 2.25
1.5 x 1.5 = 2.25
18/12 = 1.5
12/8 = 1.5
21.6/14.4 = 1.5
54°
21.6"
12"
b
90°
36°
18"
Perimeter and Area of Similar Figures


P_a = 8 + 12 + 14.4 = 34.4; P_b = 8 + 18 + 19.7 = 45.7
54°
14.4"
8"
a
90°
36°
12"
45.7/34.4 = 1.33
A_a = .5 * 12" * 8" = 48 sq in; A_b = .5 * 18" * 8" = 72 sq in
72/48 = 1.5
1.33^2 = 1.77
18/12 = 1.5
8/8 = 1
19.7/14.4 = 1.37
66°
19.7"
8"
90°
24°
18"
Perimeter and Area of Similar Figures


You try it!
Rectangle B is similar to the rectangle shown below (Rectangle A). The height of Rectangle B is 15". What is the perimeter of Rectangle B?
h = 5"
A
w = 10"
Perimeter and Area of Similar Figures

You try it!

Rectangle B is similar to the rectangle shown below (Rectangle A). The height of Rectangle B is 15". What is the perimeter of Rectangle B?

$P_a = 5" + 5" + 10" + 10" = 30"$

$h_b \div h_a = 15" \div 5" = 3$

$P_b = 3\ P_a = 90"$

You try it!

Rectangle B is similar to the rectangle shown below (Rectangle A). The width of Rectangle B is 20". What is the area of Rectangle B?

You try it!

Rectangle B is similar to the rectangle shown below (Rectangle A). The width of Rectangle B is 20". What is the area of Rectangle B?

$A_a = 5" * 10" = 50$ sq in

$w_b \div w_a = 20" \div 10" = 2$

$A_b = 2^2\ A_a = 4 * 50 = 200$ sq in