

original $V = lwh$
 $6(4)(2)$

$V = 48$

$$SA = 2lw + 2lh + 2wh$$
$$2(6)(4) + 2(6)(2) + 2(4)(2)$$
$$48 + 24 + 16$$

$SA = 88$

length $\frac{1}{2}$ $V = lwh$
 $3(4)(2)$

$V = 24$

$$SA = 2lw + 2lh + 2wh$$
$$2(3)(4) + 2(3)(2) + 2(4)(2)$$
$$24 + 12 + 16$$

$SA = 52$

width $\frac{1}{2}$ $V = lwh$
 $6(2)(2)$

$V = 24$

$$SA = 2lw + 2lh + 2wh$$
$$2(6)(2) + 2(6)(2) + 2(2)(2)$$
$$24 + 24 + 8$$

$SA = 56$

height $\frac{1}{2}$ $V = lwh$
 $6(4)(1)$
 $V = 24$

$$SA = 2lw + 2lh + 2wh$$
$$= 2(6)(4) + 2(4)(1) + 2(6)(1)$$
$$48 + 12 + 8$$

$SA = 68$

Sam had a box with a volume of 116 cm^3 .
One of the sides trippled in length - what is
the new volume?

$$116 \times 3 = 48$$

just multiply
the volume
with the change!