

## Similar Triangles: Part 3

### Distribution

Distribution is an algebraic technique that allows you to multiply a monomial by an expression contained in a set of brackets.

### Example 1

Evaluate the following expression using two methods (Bedmas and Distribution):

	BEDMAS		Distribution
	$3(5+4)$		$3(5+4)$
=		or	
=			

When dealing with a numerical expression, it is more common to use BEDMAS. However, when an expression contains algebraic components, BEDMAS may not be an option.

### Example 2

Expand the following:

a)  $3(x + 2)$

b)  $4(2 - 3x)$

### Example 3

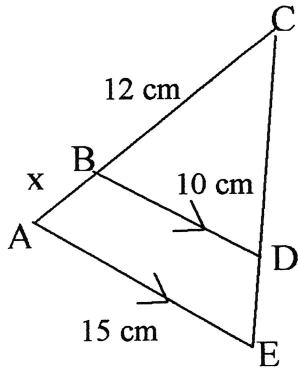
Solve the following:

a)  $3(x - 3) = x + 1$

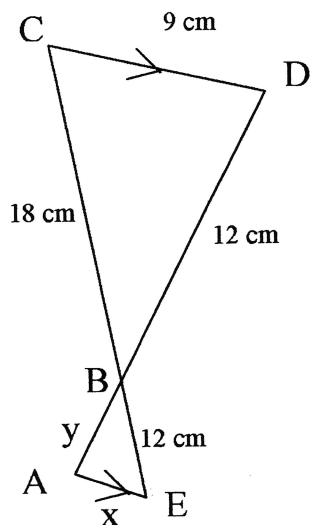
b)  $4(x - 3) = 3(x - 2)$

## Similar Triangle Practice

1. Determine the length  $x$  in the following diagram.

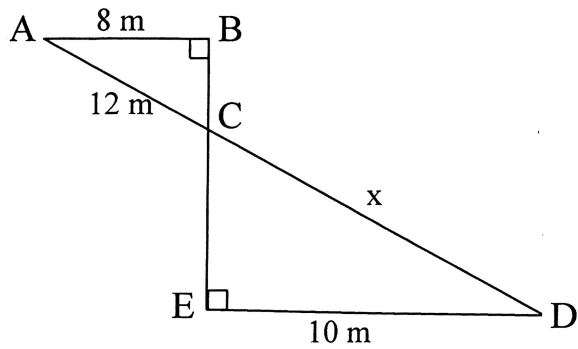


2. Determine the lengths of  $x$  and  $y$  in the following diagram.

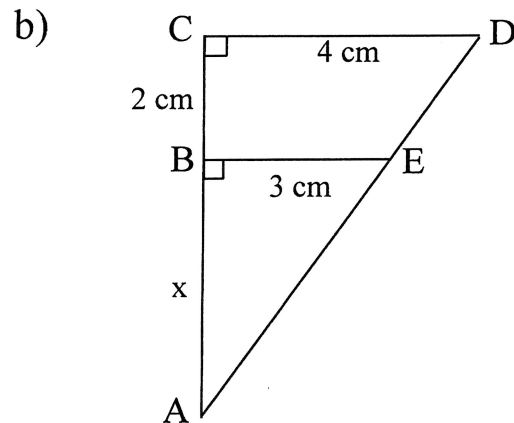
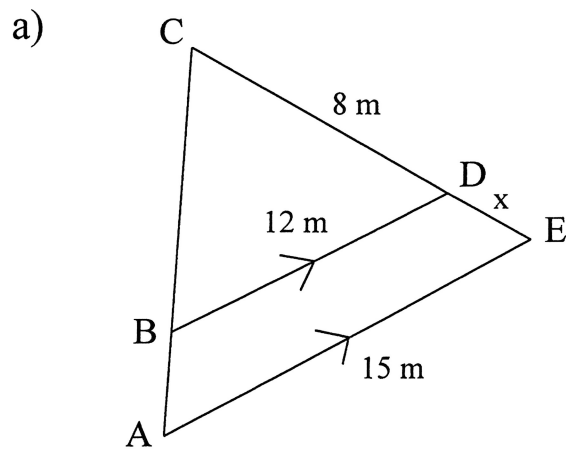


# Practice

1. Determine the length of the side marked  $x$ ; be sure to include a proof.



2. Determine the length of the side marked  $x$ ; be sure to include a proof.



Answers: 1) 15 m, 2a) 2 m, 2b) 6 cm