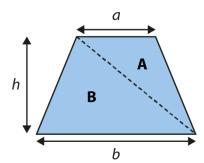
**Example 2:** Josh is deriving the formula for the area of a trapezium by thinking of the shape as split into two triangles:



He comes up with the following formula:  $(\frac{1}{2} \times a \times h) + (\frac{1}{2} \times b \times h)$ 

Rearrange the statements below to show what Josh's reasoning might have been.

Divide the trapezium into two triangles, A and B

Area of trapezium =  $\frac{1}{2}$  (a + b)h

Area of trapezium =  $\frac{1}{2}$  (ah + bh).

The area of triangle  $B = \frac{1}{2} \times b \times h$ 

Area of trapezium =  $(\frac{1}{2} \times a \times h) + (\frac{1}{2} \times b \times h)$ 

The area of the trapezium = area of triangle A + area of triangle B

The area of triangle  $A = \frac{1}{2} \times a \times h$