

# Areas



21 Boom cards

Click [HERE](#) for a playable preview

## TRAPEZOIDS

In this series of BOOM cards, the student must calculate the total area of the yellow shaded area of each trapezoid.

The cards start out simple but become progressively more challenging, with ever increasing sizes of trapezoids.

The first card illustrates the formula for calculating the area of a trapezoid. This deck contains 20 question cards, each of which depicts a unique trapezoid in various orientations for which the student must calculate the total area.

Decks in this series:

- Areas: RECTANGLES (64 question cards)
- Areas: RIGHT TRIANGLES (20 question cards)
- Areas: TRIANGLES (20 question cards)
- Areas: PARALLELOGRAMS (20 question cards)
- Areas: TRAPEZOIDS (20 question cards)
- Areas: CIRCLES (20 question cards)
- Areas: ELLIPSES (20 question cards)
- Areas: COMPLEX SHAPES (22 question cards)

Area  
of a  
Trapezoid

What's the area of a trapezoid with base width  $a$ , top width  $b$  and perpendicular height  $h$ ?

Imagine a rectangle that intersects the slanted sides at exactly their half-way points. The width of that rectangle is the average of the two lengths  $a$  &  $b$  =  $1/2(a+b)$ .

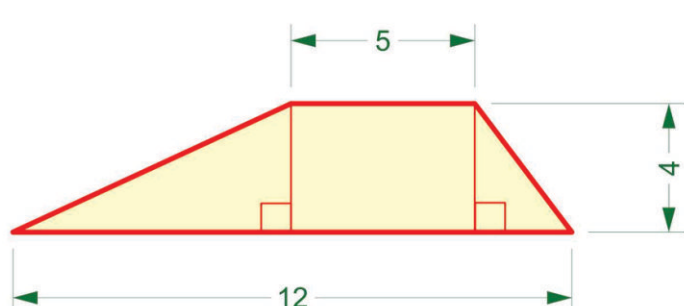
Look at the 2 pairs of identical outer triangles that this intersection creates.

Rearrange those triangles and they will completely fill the rectangle, which is the exact same area of the original trapezoid.

Therefore, area of trapezoid =  $1/2(a+b) \times h$

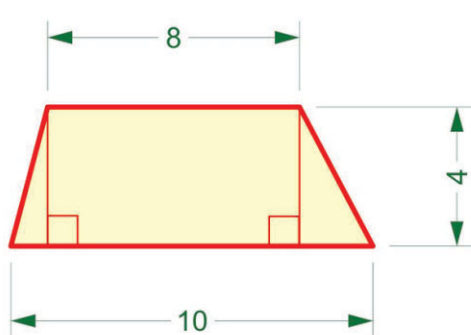
<https://www.bouncelearning.com/author/bouncelearningkids>

What is the total area of the yellow shaded area in square units (correct to **one** decimal place)?

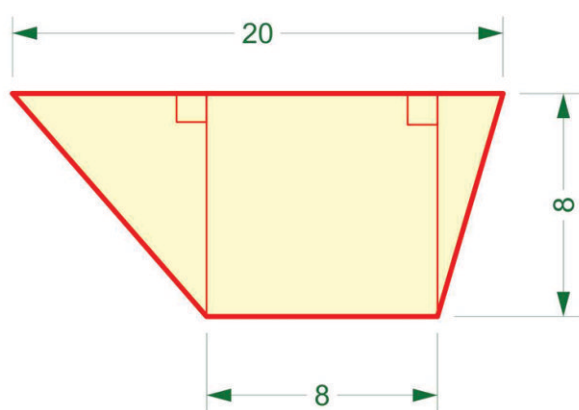


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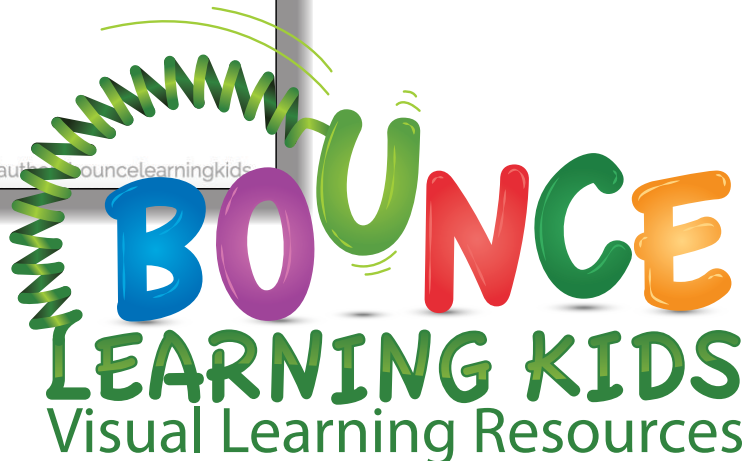
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You may be eligible for a free trial from Boom Learning. Read here for details:

<http://bit.ly/BoomTrial>. If you choose not to stay on a premium account after your free trial, you will still be able to assign all your Boom Cards to as many students as you see fit using Fast Play pins (which give instant feedback for decks that are self-grading).