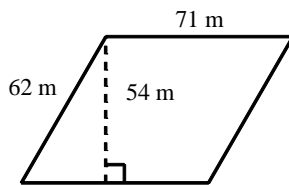


NAME: _____

P.I. G.G.38: Investigate, justify, and apply theorems about parallelograms involving their angles, sides, and diagonals

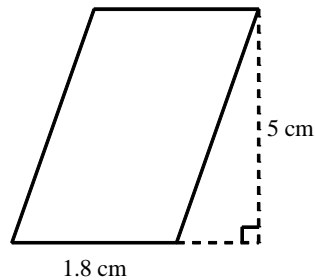
Find the area:

1.



- [A] 3834 m^2 [B] 3591 m^2 [C] 4402 m^2 [D] 4118 m^2

2.



3. Graph the lines $y = -2$, $y = 4$, $y = 2x$, and $y = 2x - 12$, and find the area of the resulting parallelogram.
4. The area of a parallelogram is 128 cm^2 . The height is one half the base. Find the perimeter of the parallelogram.
[A] 16 cm [B] 48 cm [C] 128 cm [D] 8 cm [E] not enough information
5. Given parallelogram $ABCD$, for what value of $m\angle A$ will the parallelogram have the greatest area? Explain.

[1] A

[2] 9 cm²

[3] 36 square units

[4] E

For $m\angle A = 90$. Any larger or smaller angle will result in a shorter height and, hence, a

[5] smaller area.