

The formula for the area of a parallelogram is:
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 w is the length of the width of the rectangle.

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 w is the length of the width of the rectangle.

The formula for the area of a square is:
 $A = s^2$, where s is the length of a side of the
square.

Since squares and rectangles are also parallelograms, the formula for the area of a parallelogram also works for squares and rectangles.

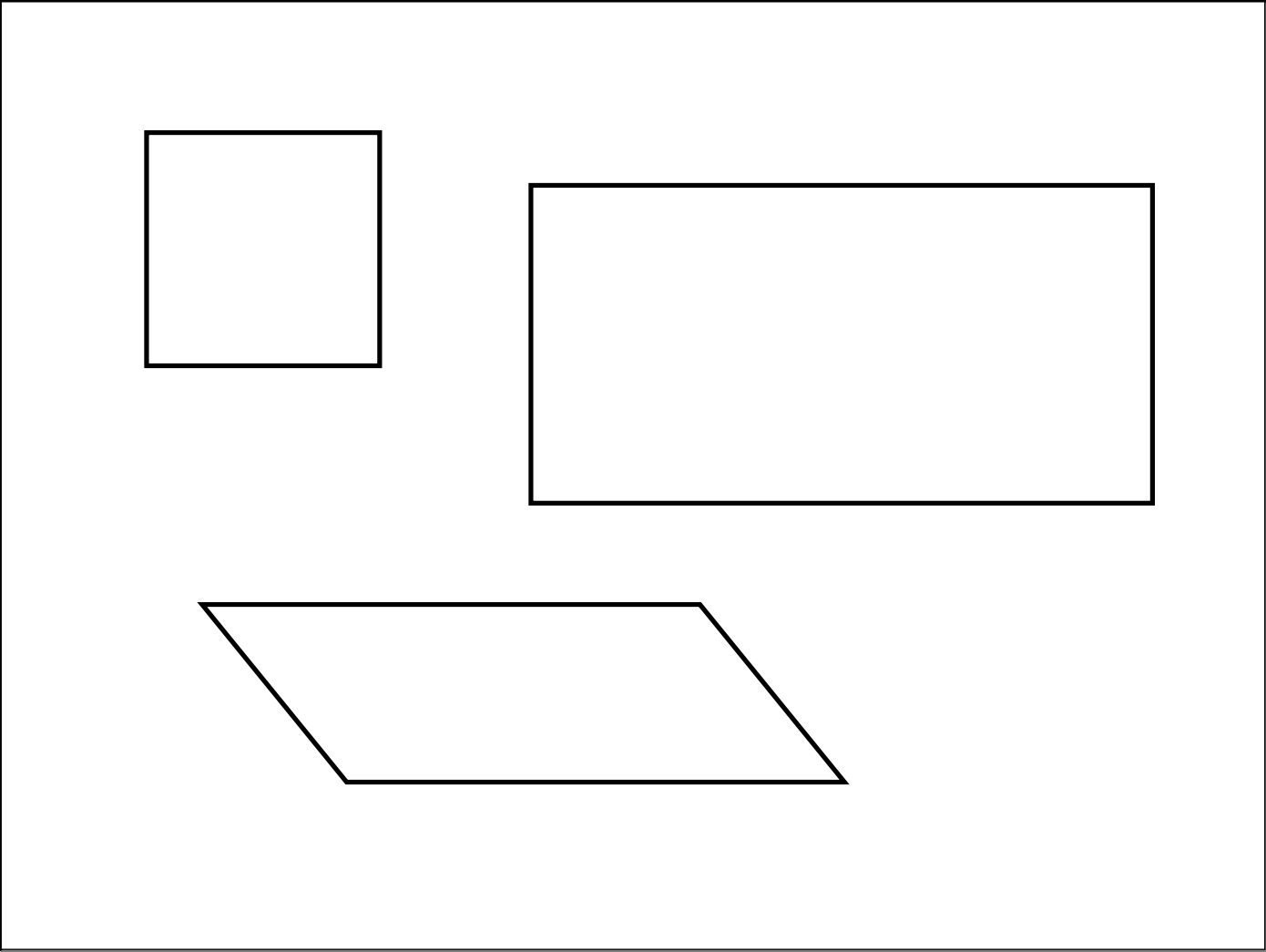
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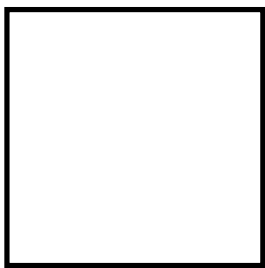
For a square, one of the sides can be thought of as the base and another side can be thought of as the height.

Since squares and rectangles are also parallelograms, the formula for the area of a parallelogram also works for squares and rectangles.

For a square, one of the sides can be thought of as the base and another side can be thought of as the height.

For a rectangle, the length can be thought of as the base and the width can be thought of as the height or vice versa.





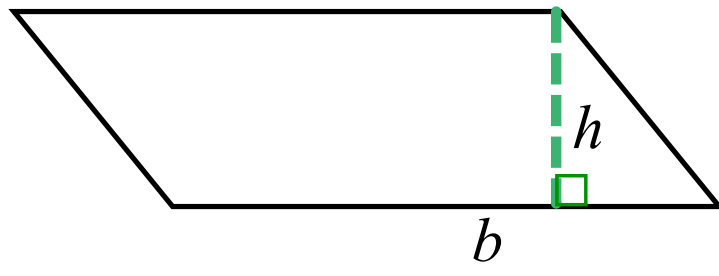
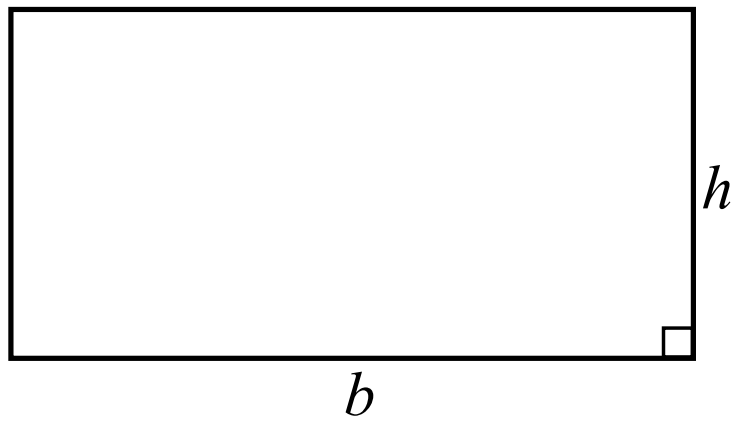
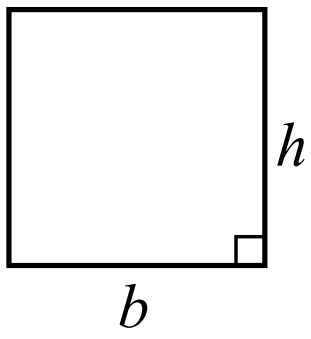
b



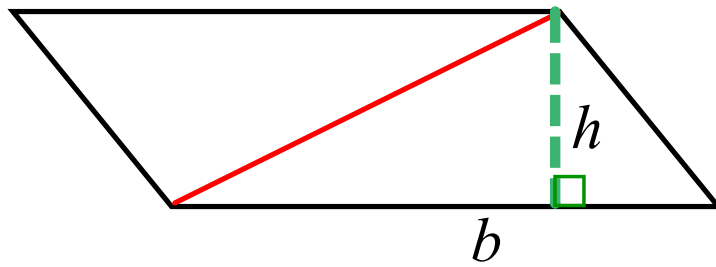
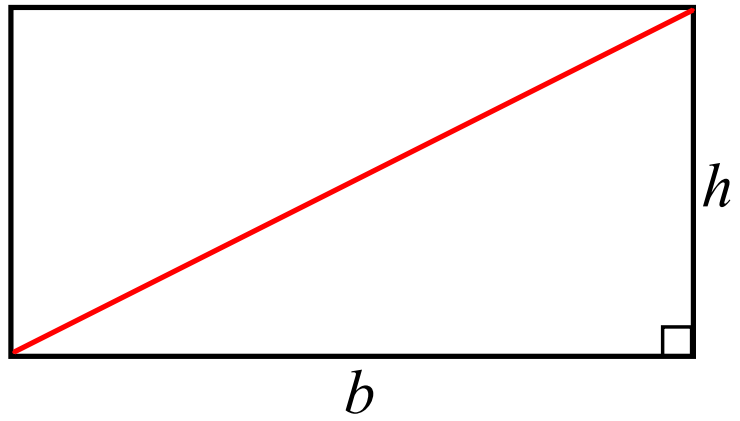
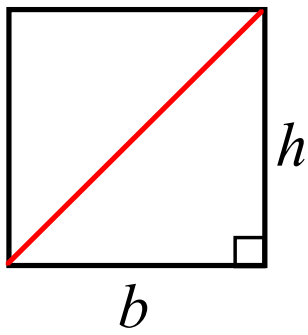
b



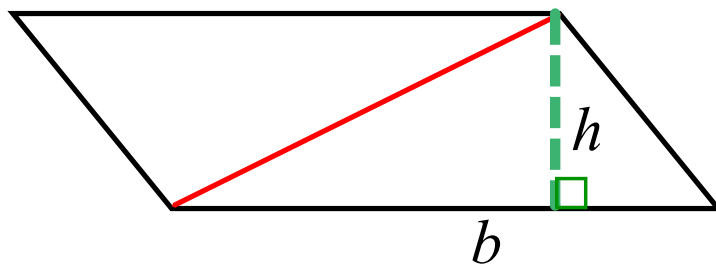
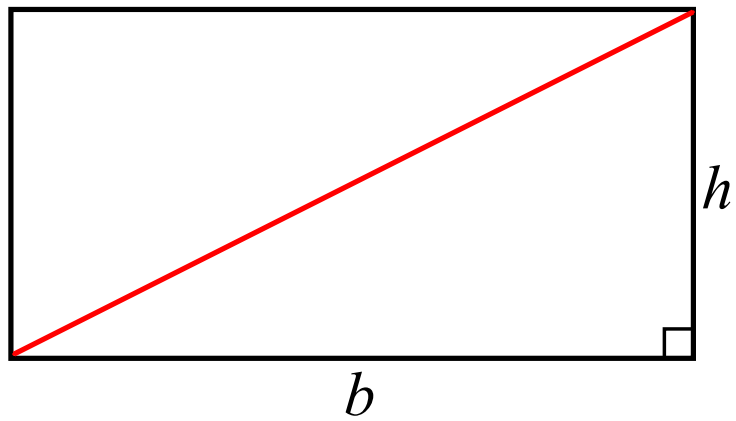
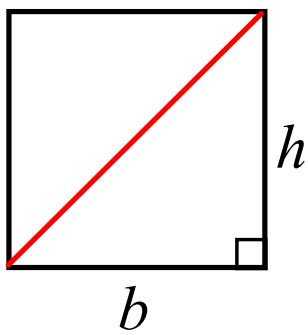
b



The red segments are *diagonals*.

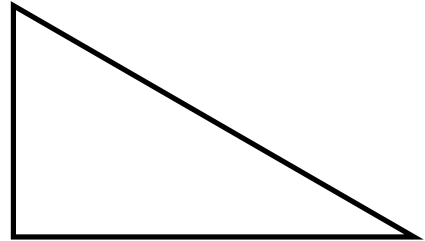
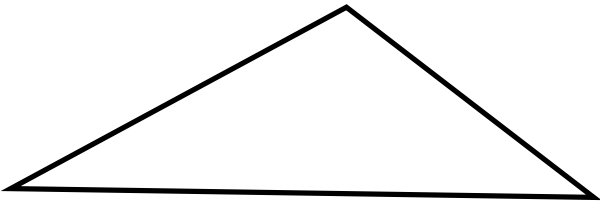
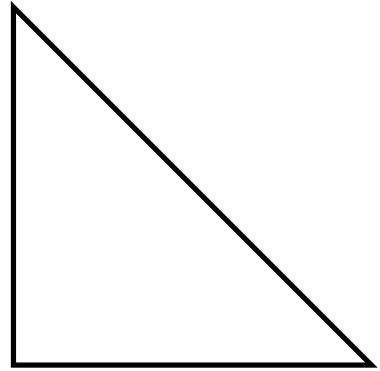
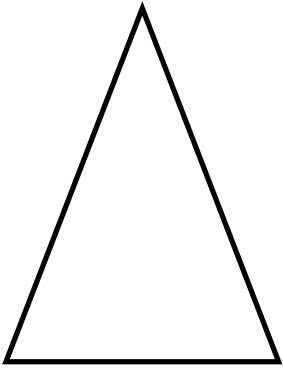


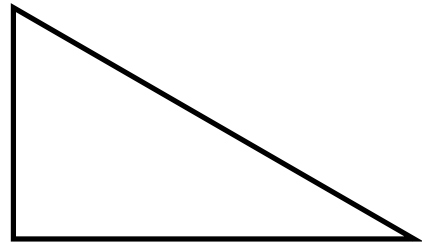
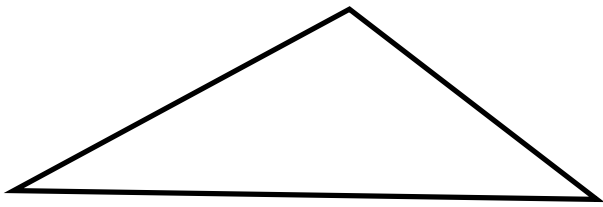
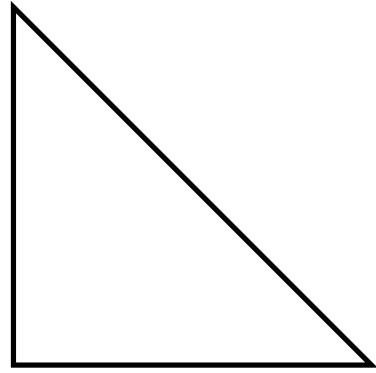
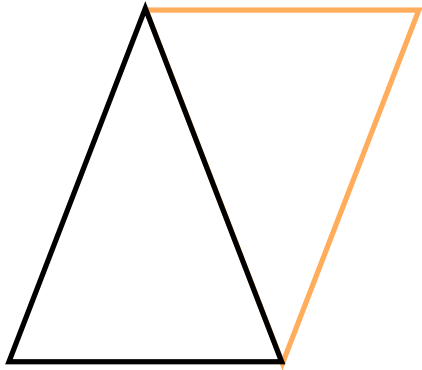
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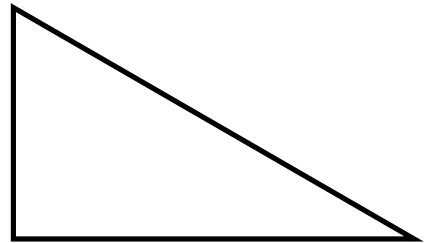
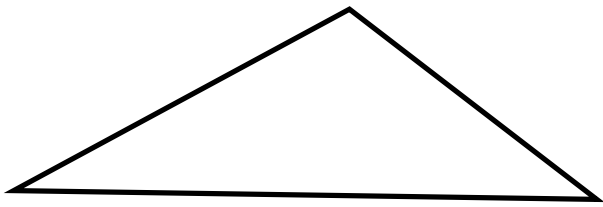
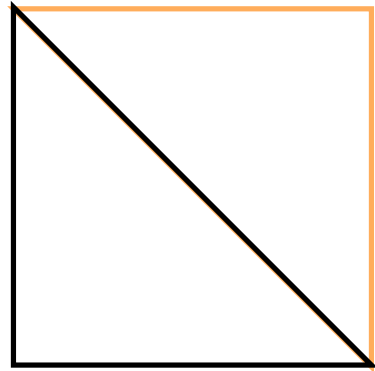
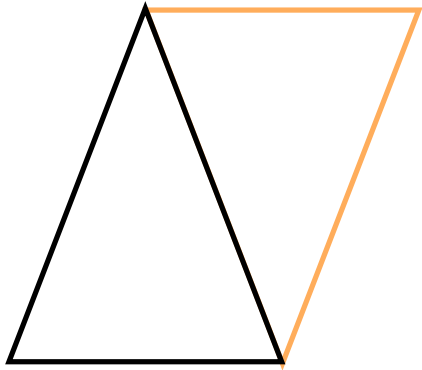


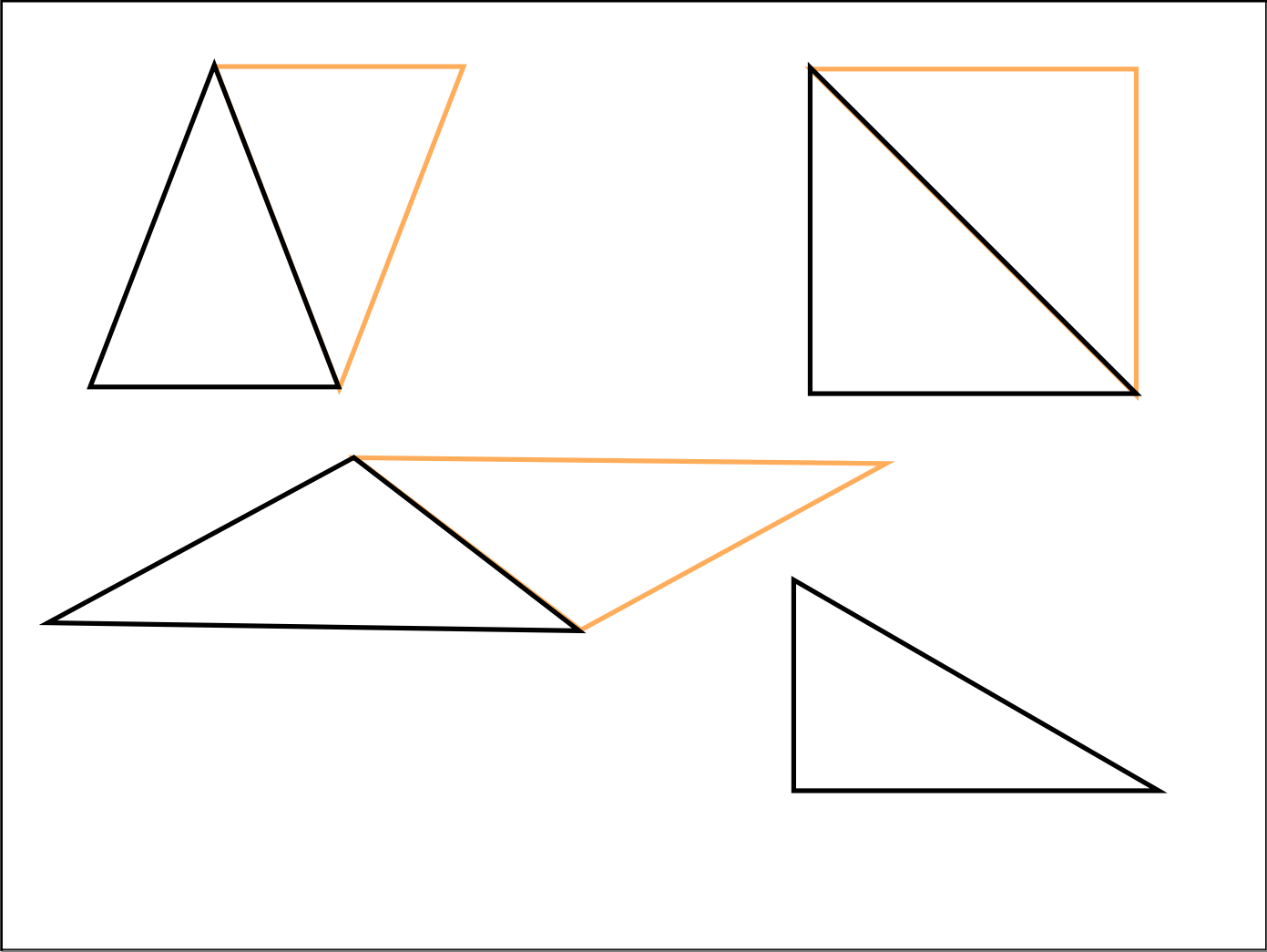
The formula for
the area of a
triangle is:

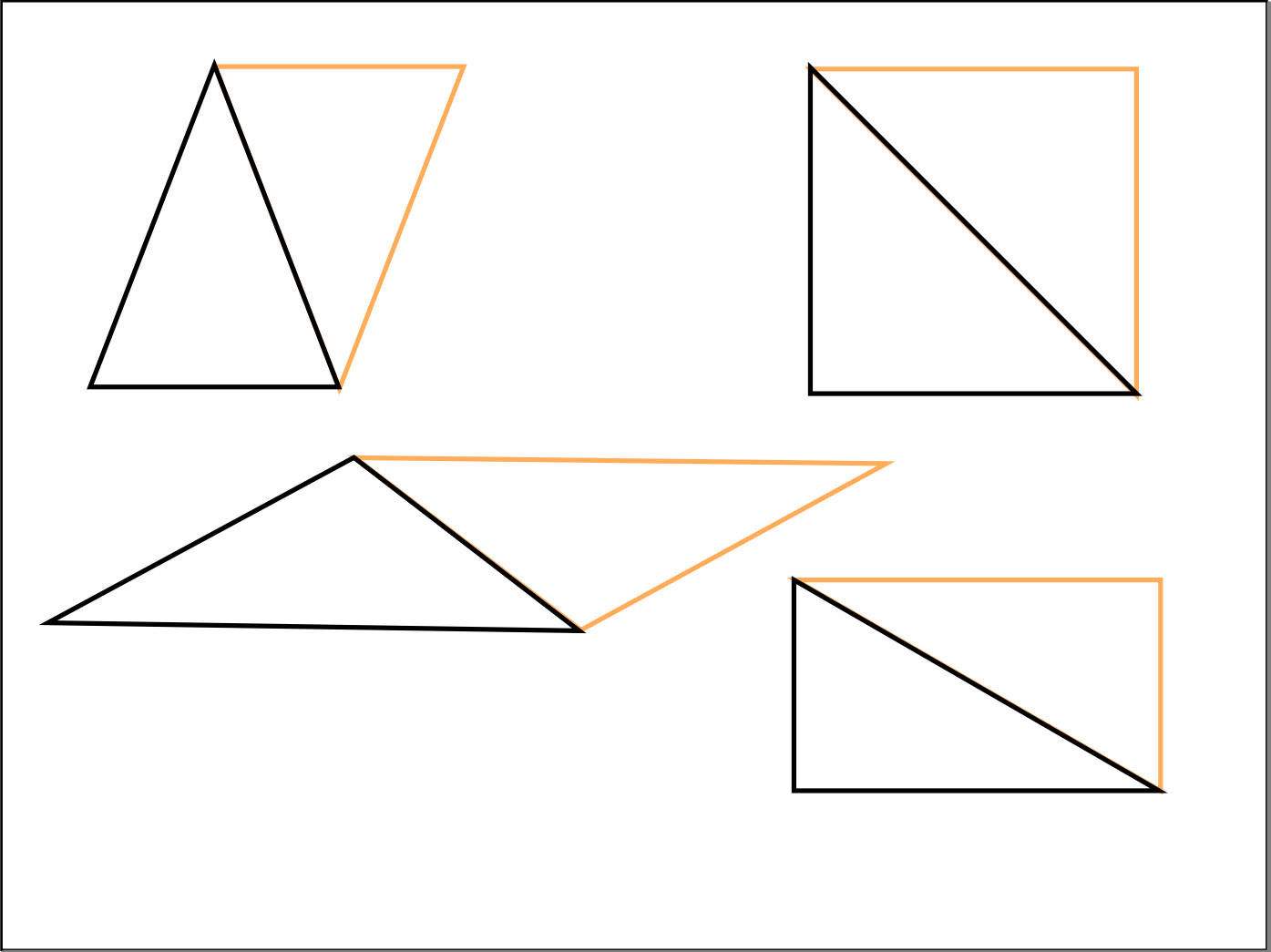
$$A = \frac{1}{2}bh$$

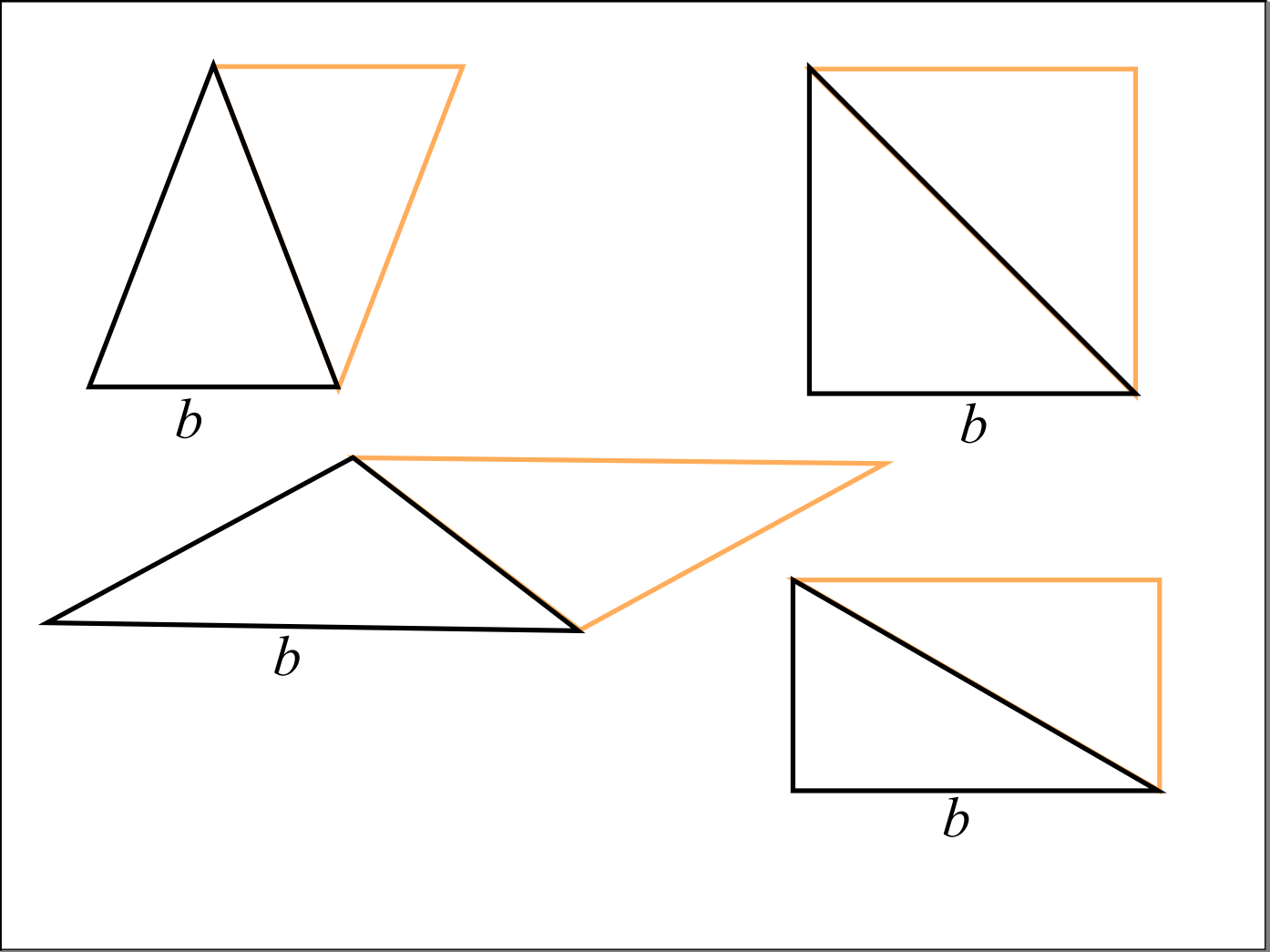


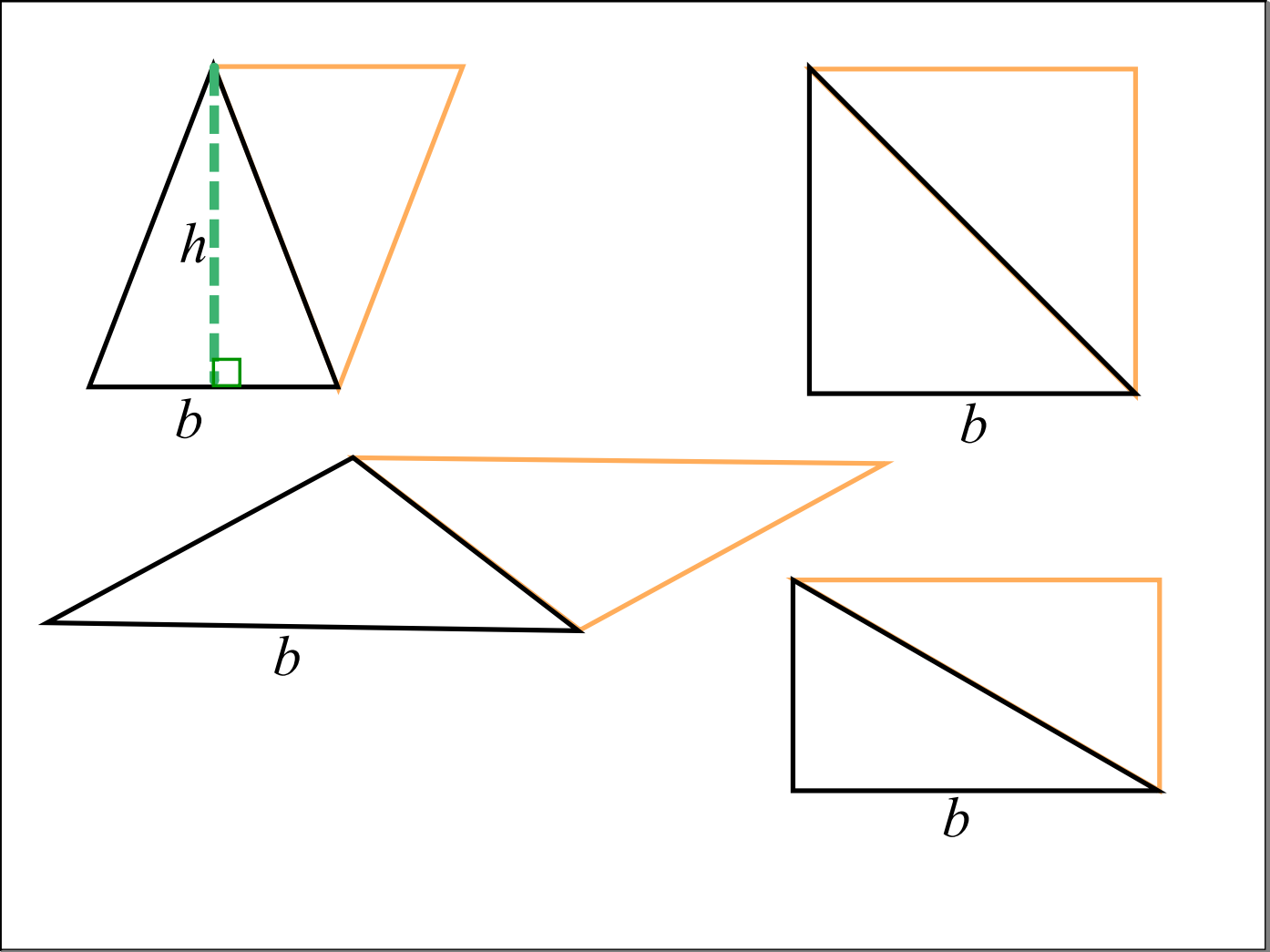


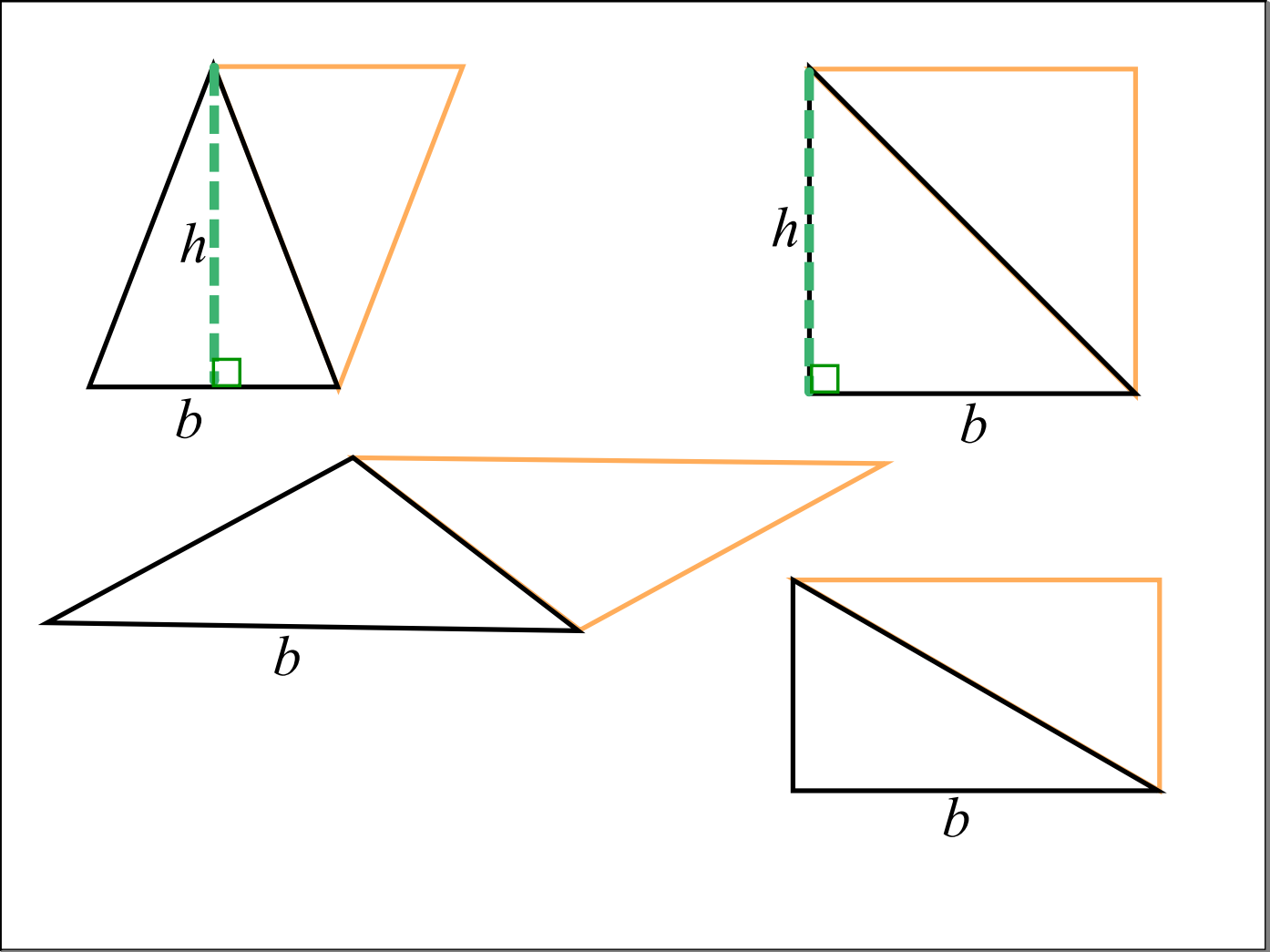


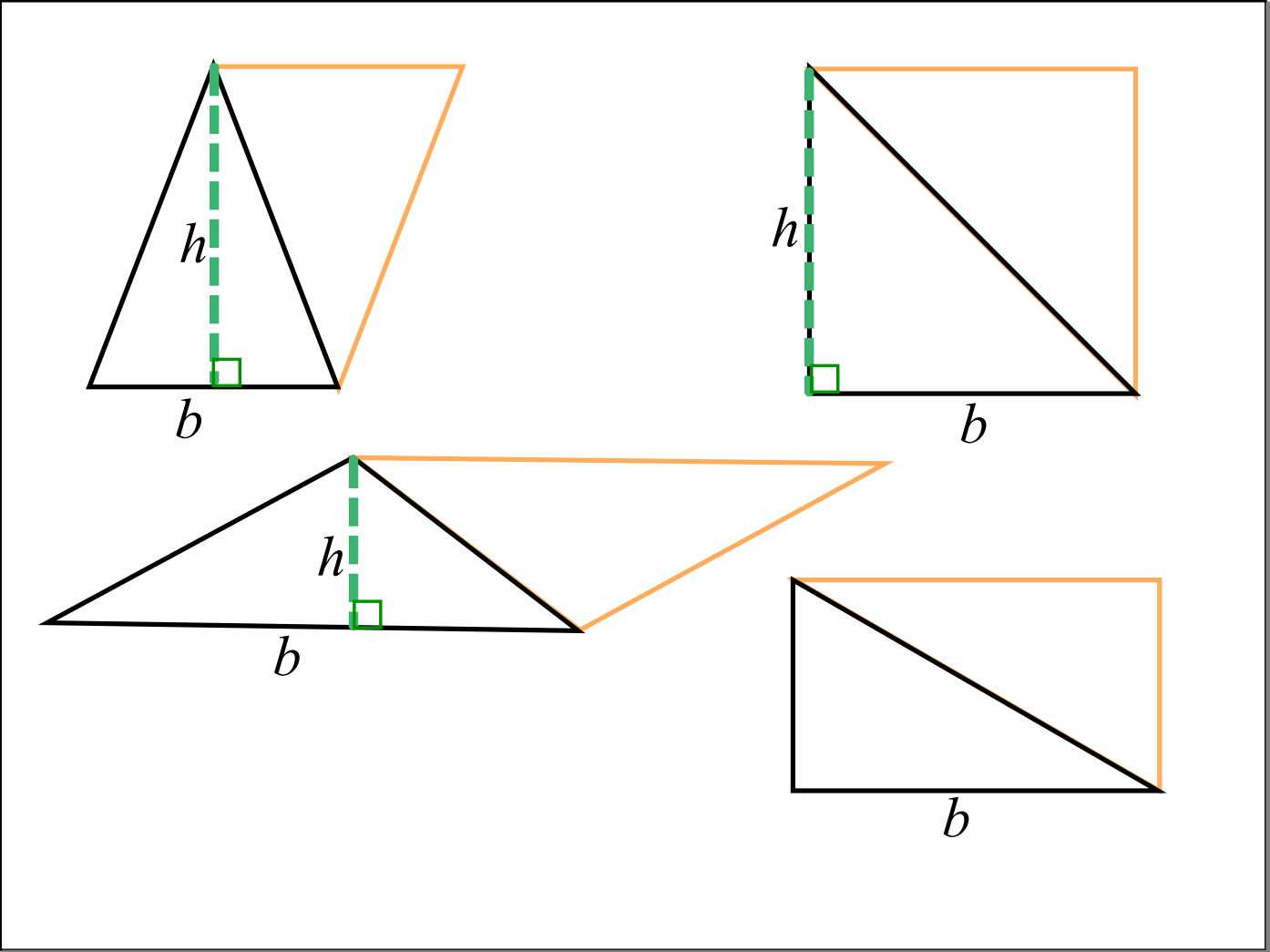


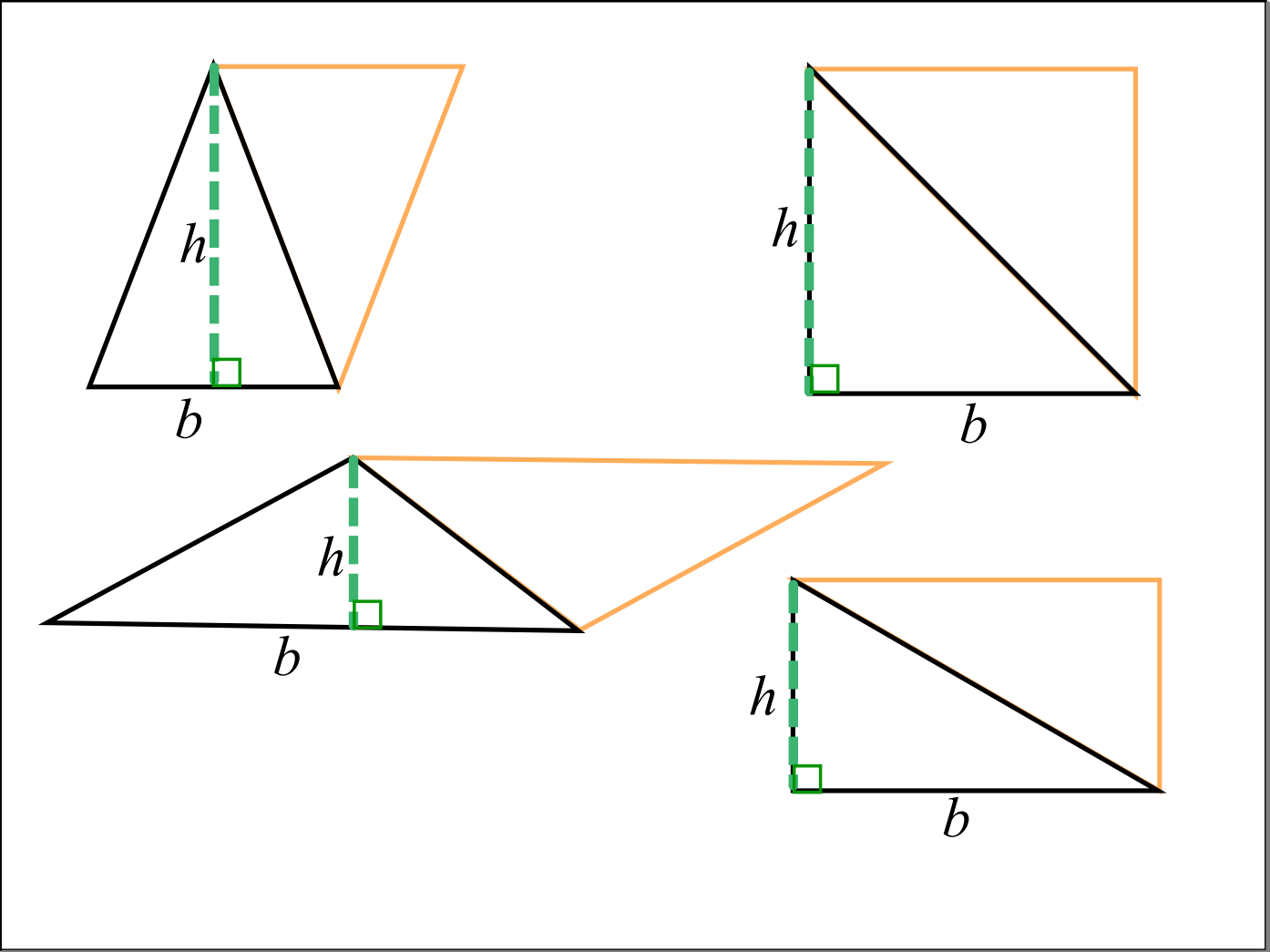


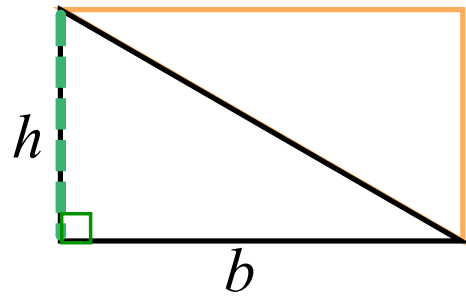
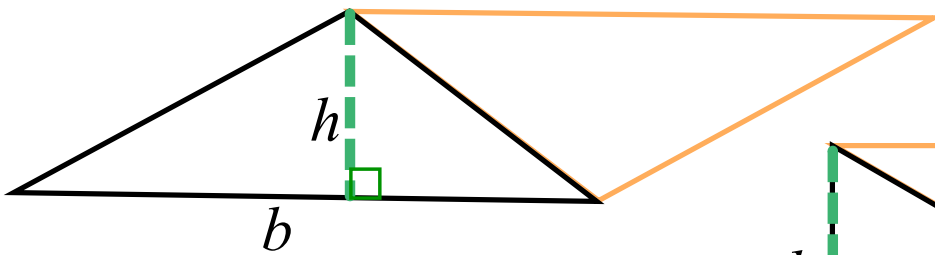
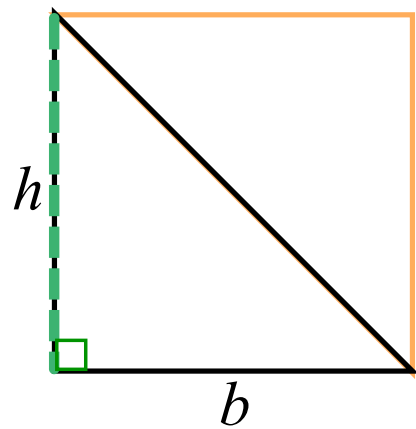
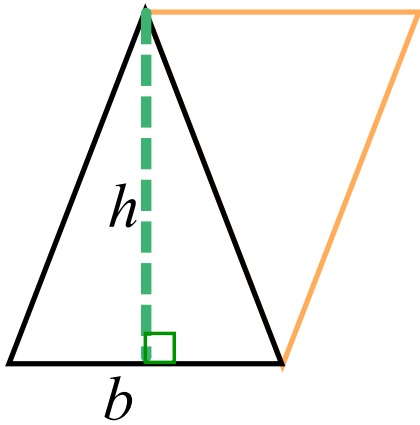






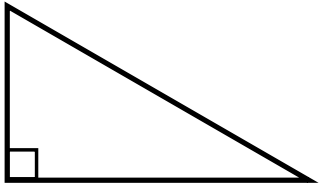




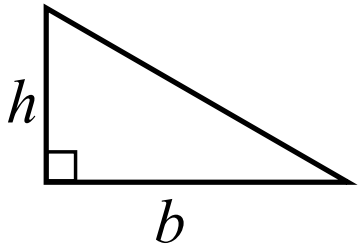


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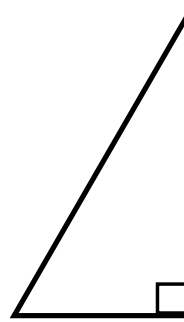
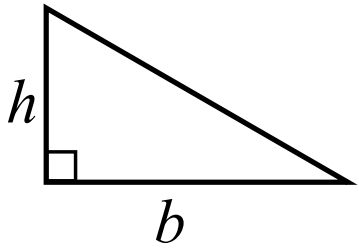
Any of the three sides of a triangle may
be used as the base.



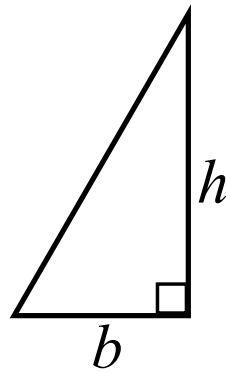
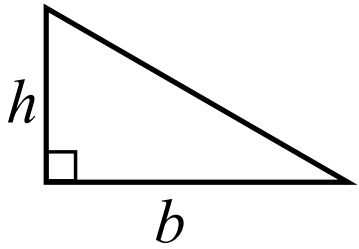
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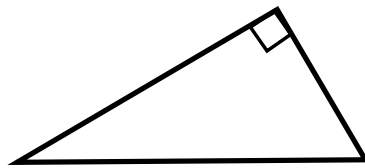
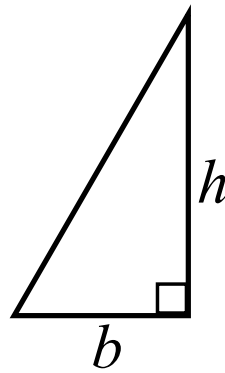
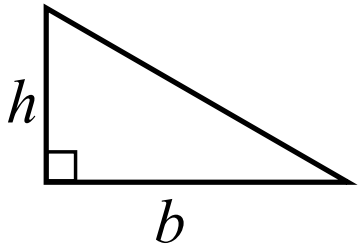
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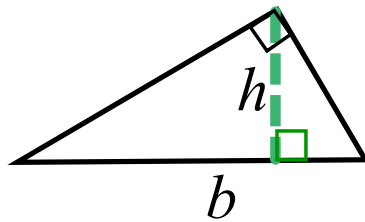
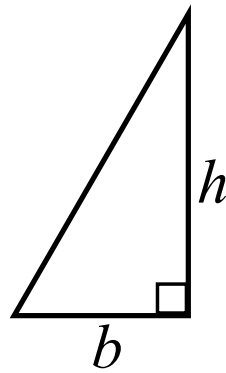
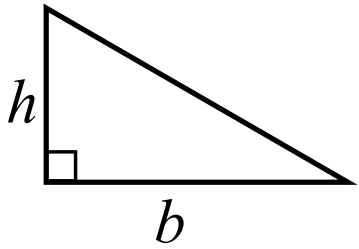
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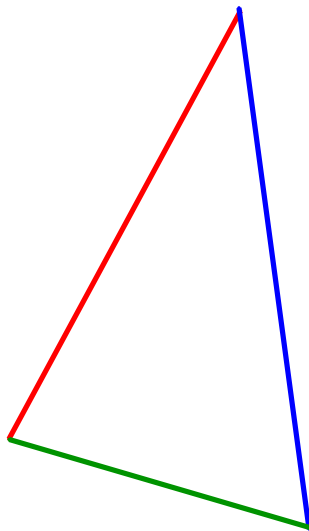
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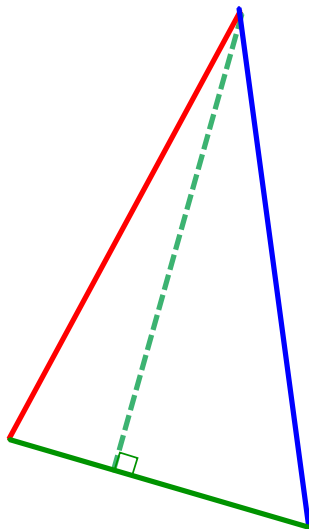
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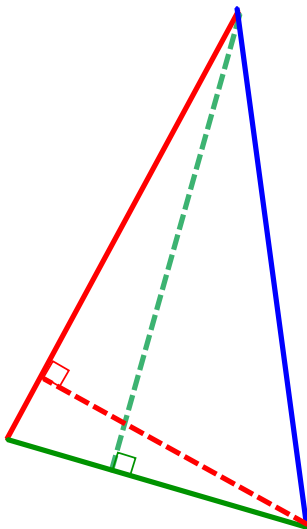
Any of the three sides of a triangle may be used as the base. There is a different height for each base.



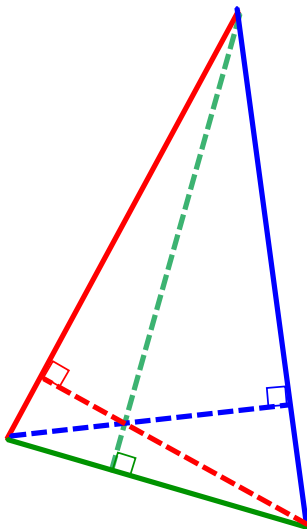
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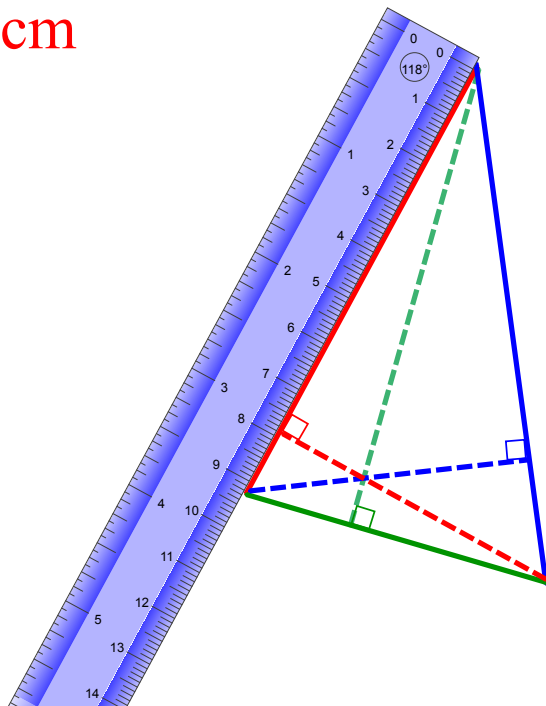


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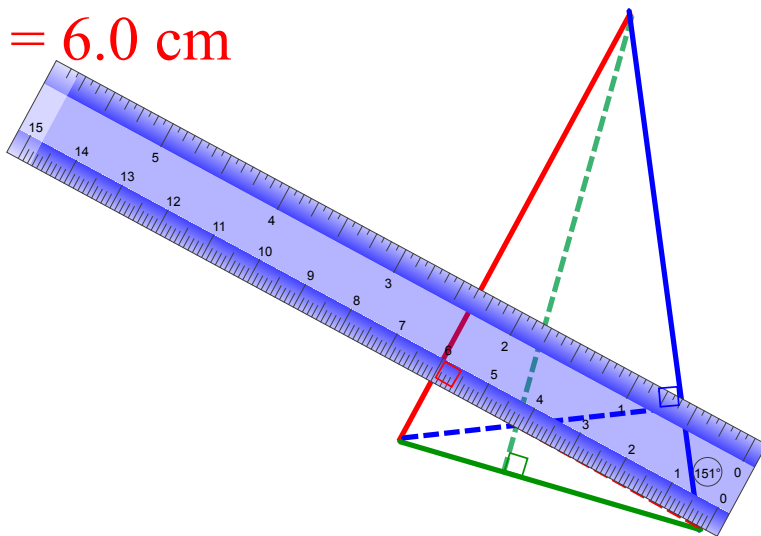
$$b = 9.3 \text{ cm}$$



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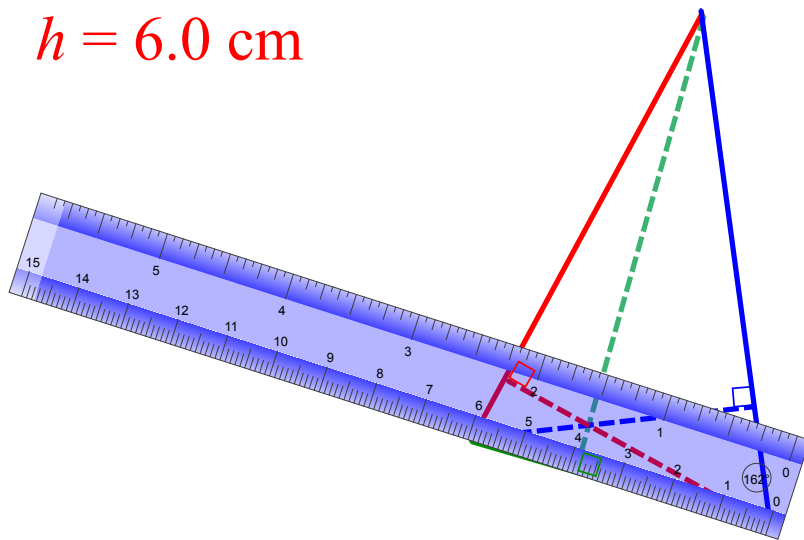
$$h = 6.0 \text{ cm}$$



Any of the three sides of a triangle may be used as the base. There is a different height for each base.

$$b = 9.3 \text{ cm}$$
$$h = 6.0 \text{ cm}$$

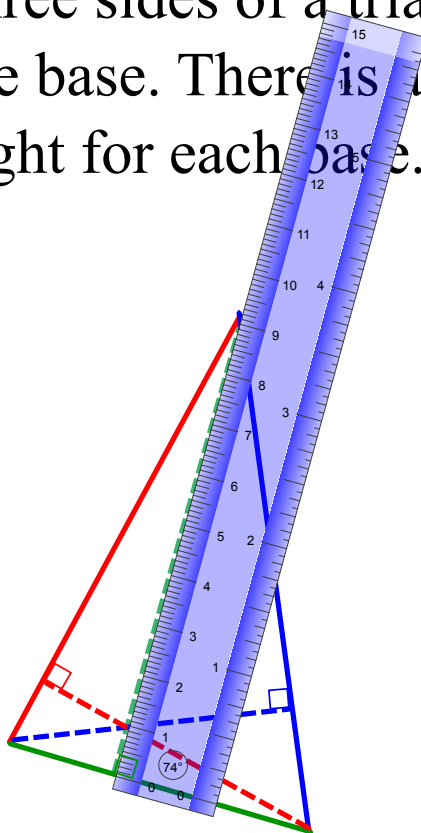
$$b = 5.9 \text{ cm}$$



Any of the three sides of a triangle may be used as the base. There is a different height for each base.

$$b = 9.3 \text{ cm}$$
$$h = 6.0 \text{ cm}$$

$$b = 5.9 \text{ cm}$$
$$h = 9.2 \text{ cm}$$

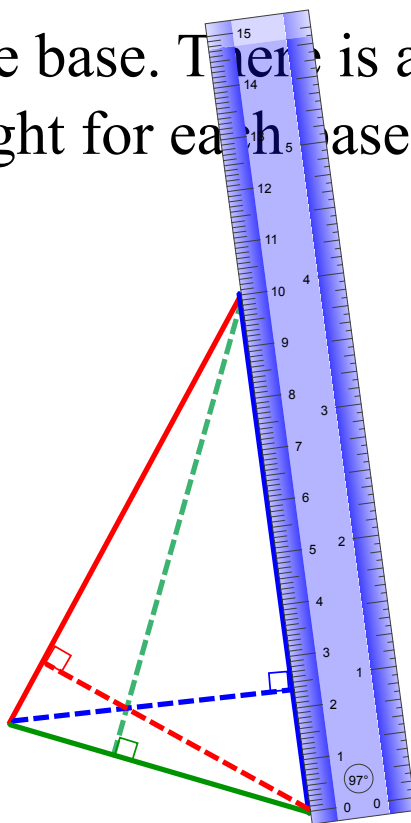


Any of the three sides of a triangle may be used as the base. There is a different height for each base.

$$b = 9.3 \text{ cm}$$
$$h = 6.0 \text{ cm}$$

$$b = 10.0 \text{ cm}$$

$$b = 5.9 \text{ cm}$$
$$h = 9.2 \text{ cm}$$

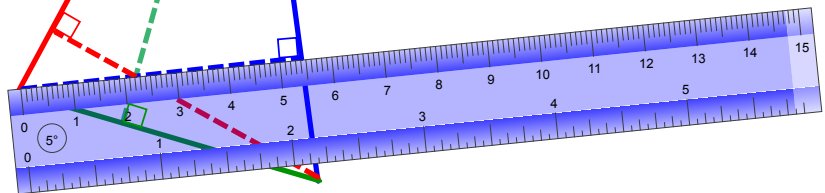


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$$b = 9.3 \text{ cm}$$
$$h = 6.0 \text{ cm}$$

$$b = 5.9 \text{ cm}$$
$$h = 9.2 \text{ cm}$$

$$b = 10.0 \text{ cm}$$
$$h = 5.5 \text{ cm}$$

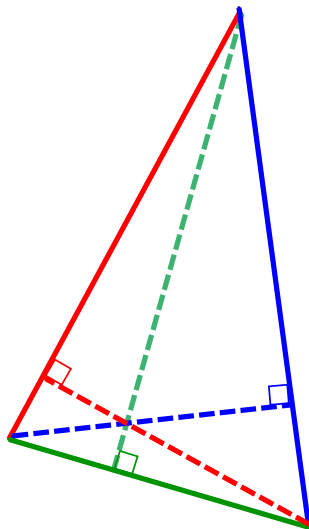


Any of the three sides of a triangle may be used as the base. There is a different height for each base.

$$\begin{aligned}b &= 9.3 \text{ cm} \\h &= 6.0 \text{ cm} \\A &= 27.9 \text{ cm}^2\end{aligned}$$

$$\begin{aligned}b &= 10.0 \text{ cm} \\h &= 5.5 \text{ cm}\end{aligned}$$

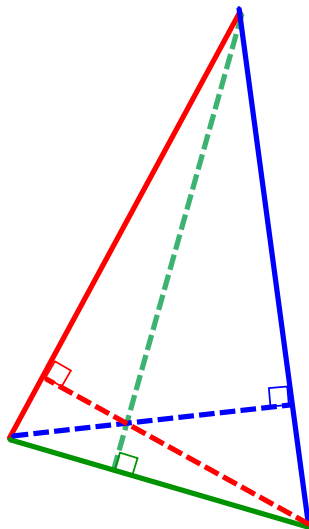
$$\begin{aligned}b &= 5.9 \text{ cm} \\h &= 9.2 \text{ cm}\end{aligned}$$



Any of the three sides of a triangle may be used as the base. There is a different height for each base.

$$\begin{aligned} b &= 9.3 \text{ cm} \\ h &= 6.0 \text{ cm} \\ A &= 27.9 \text{ cm}^2 \end{aligned}$$

$$\begin{aligned} b &= 10.0 \text{ cm} \\ h &= 5.5 \text{ cm} \end{aligned}$$

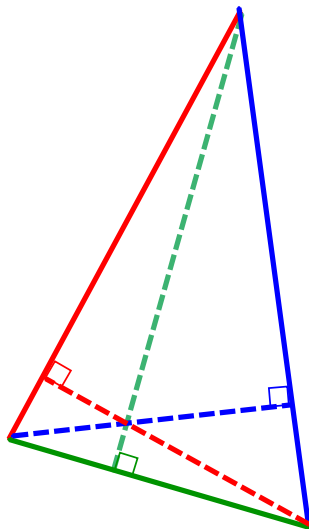


$$\begin{aligned} b &= 5.9 \text{ cm} \\ h &= 9.2 \text{ cm} \\ A &= 27.14 \text{ cm}^2 \end{aligned}$$

Any of the three sides of a triangle may be used as the base. There is a different height for each base.

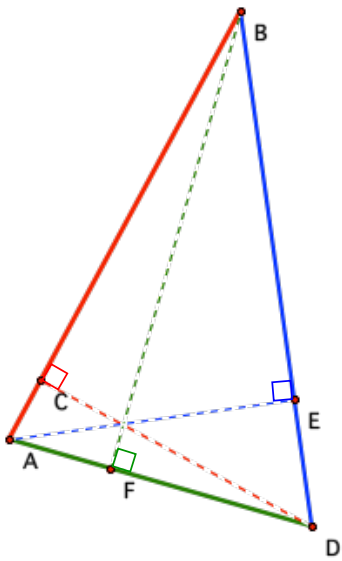
$$\begin{aligned} b &= 9.3 \text{ cm} \\ h &= 6.0 \text{ cm} \\ A &= 27.9 \text{ cm}^2 \end{aligned}$$

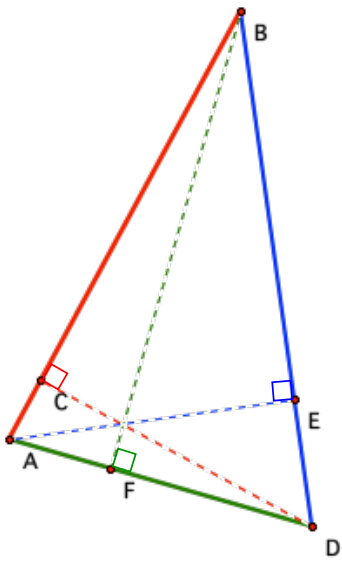
$$\begin{aligned} b &= 10.0 \text{ cm} \\ h &= 5.5 \text{ cm} \\ A &= 27.5 \text{ cm}^2 \end{aligned}$$



$$\begin{aligned} b &= 5.9 \text{ cm} \\ h &= 9.2 \text{ cm} \\ A &= 27.14 \text{ cm}^2 \end{aligned}$$

$$\begin{aligned}m \overline{AB} &= 9.87 \text{ cm} \\m \overline{CD} &= 6.24 \text{ cm} \\0.5 \cdot m \overline{AB} \cdot m \overline{CD} &= 30.77 \text{ cm}^2\end{aligned}$$





$$m \overline{AB} = 9.87 \text{ cm}$$

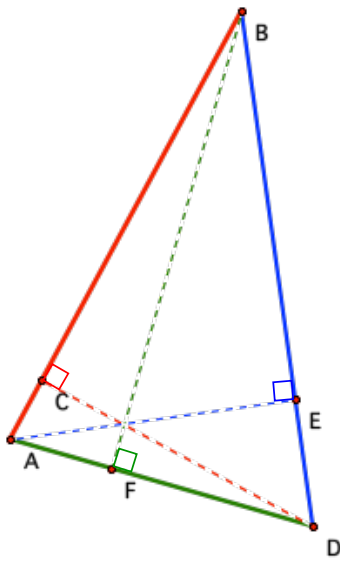
$$m \overline{CD} = 6.24 \text{ cm}$$

$$0.5 \cdot m \overline{AB} \cdot m \overline{CD} = 30.77 \text{ cm}^2$$

$$m \overline{DA} = 6.39 \text{ cm}$$

$$m \overline{FB} = 9.64 \text{ cm}$$

$$0.5 \cdot m \overline{DA} \cdot m \overline{FB} = 30.77 \text{ cm}^2$$



$$m \overline{AB} = 9.87 \text{ cm}$$

$$m \overline{CD} = 6.24 \text{ cm}$$

$$0.5 \cdot m \overline{AB} \cdot m \overline{CD} = 30.77 \text{ cm}^2$$

$$m \overline{DA} = 6.39 \text{ cm}$$

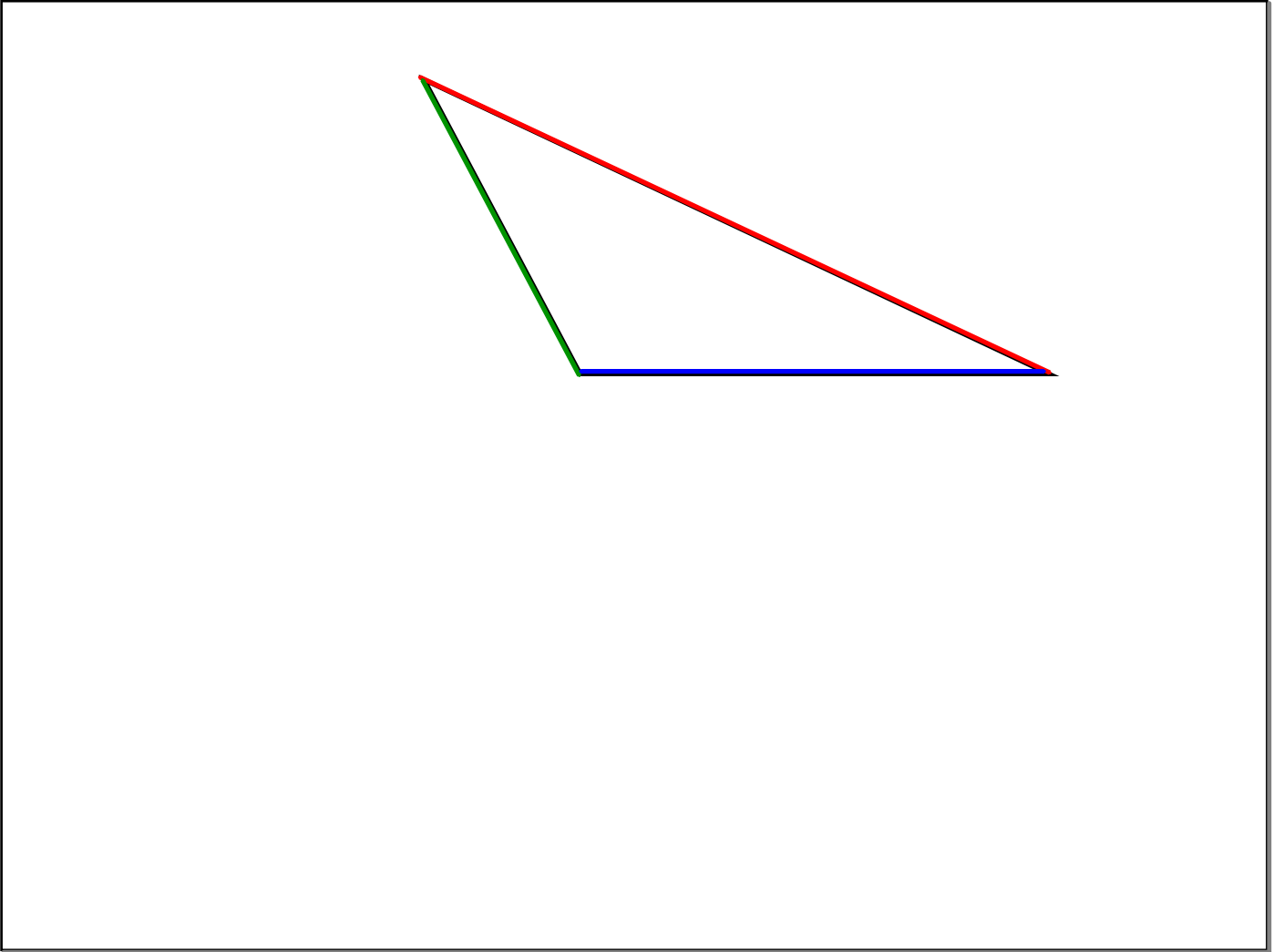
$$m \overline{FB} = 9.64 \text{ cm}$$

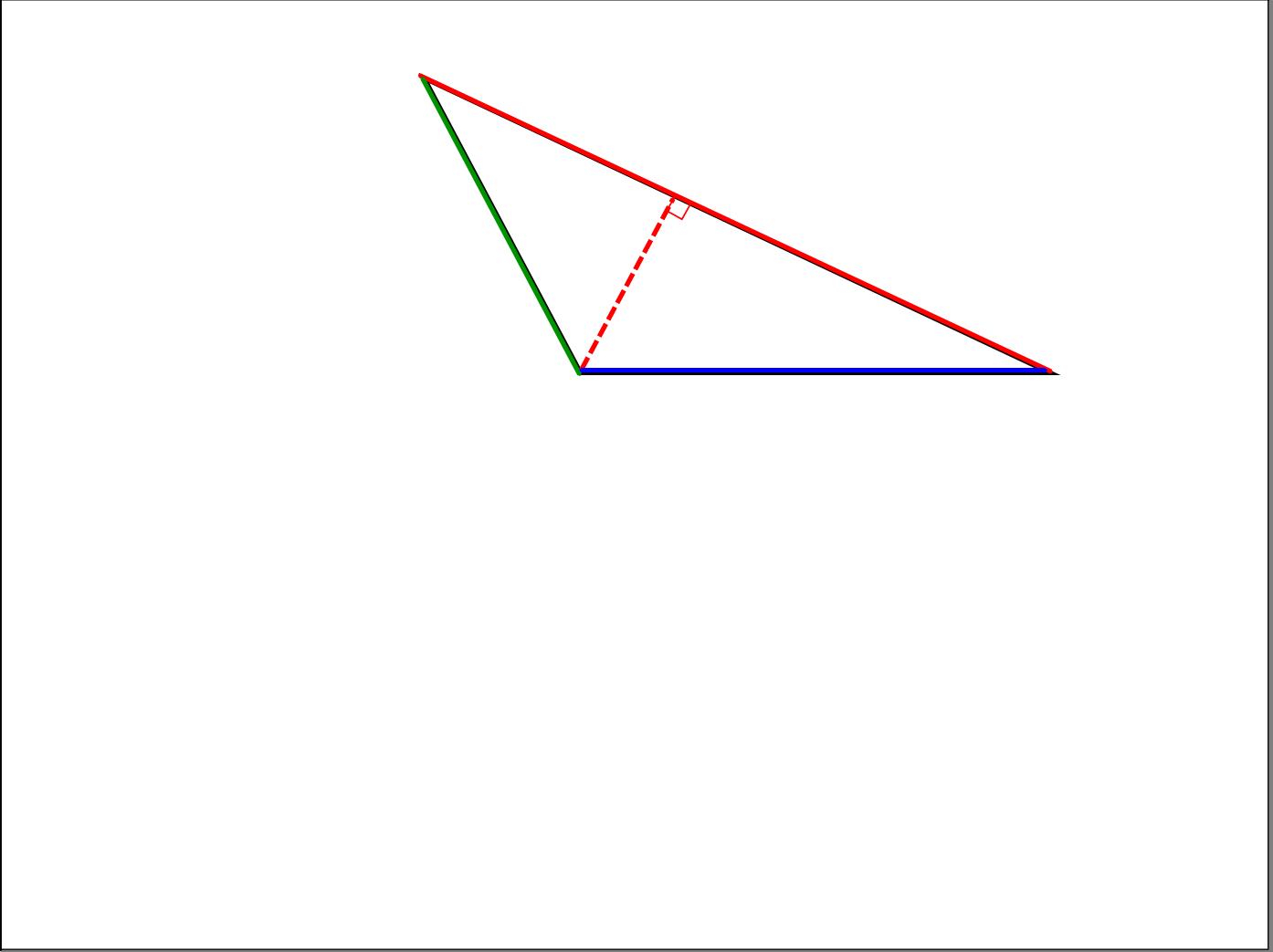
$$0.5 \cdot m \overline{DA} \cdot m \overline{FB} = 30.77 \text{ cm}^2$$

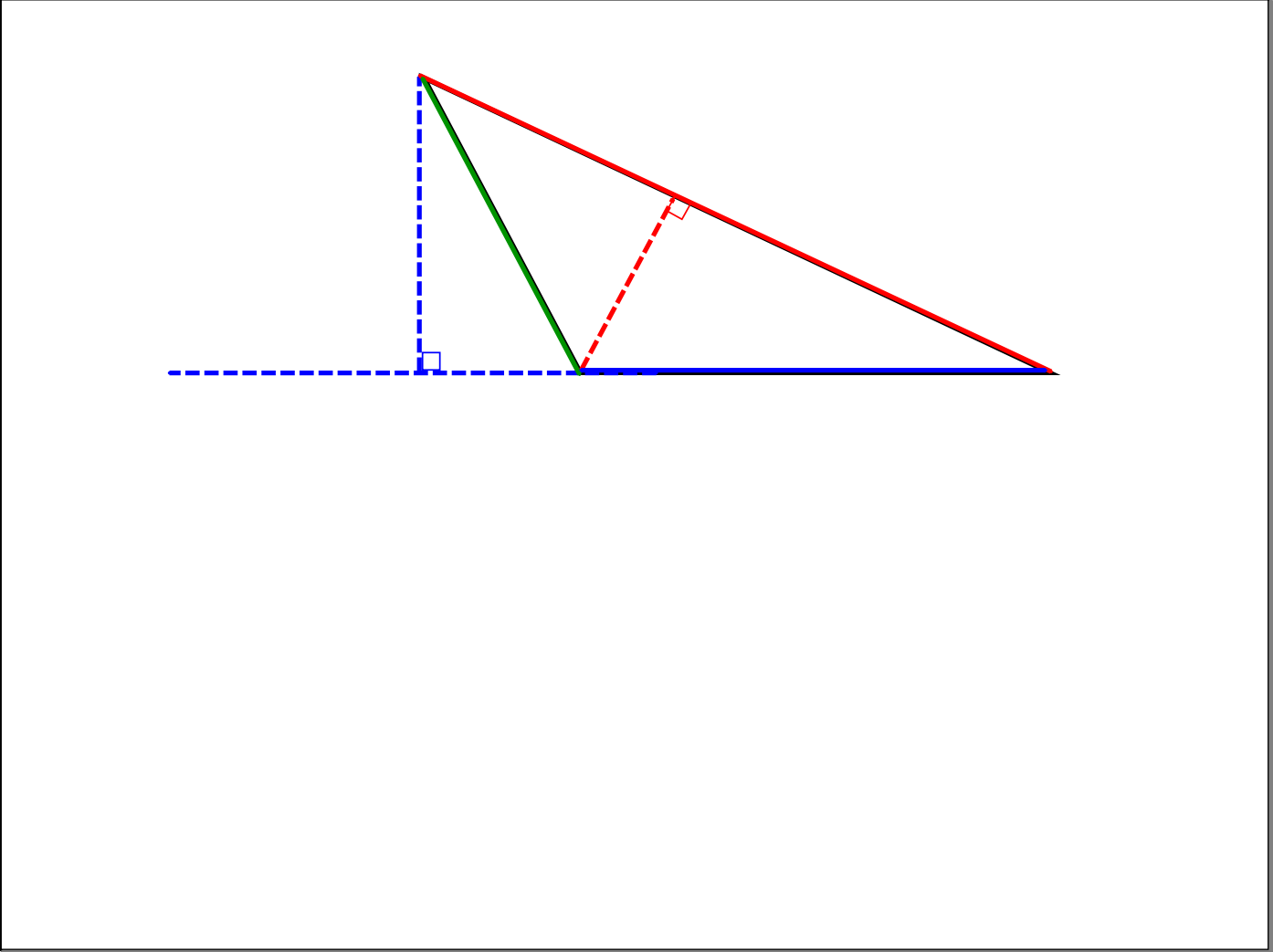
$$m \overline{BD} = 10.54 \text{ cm}$$

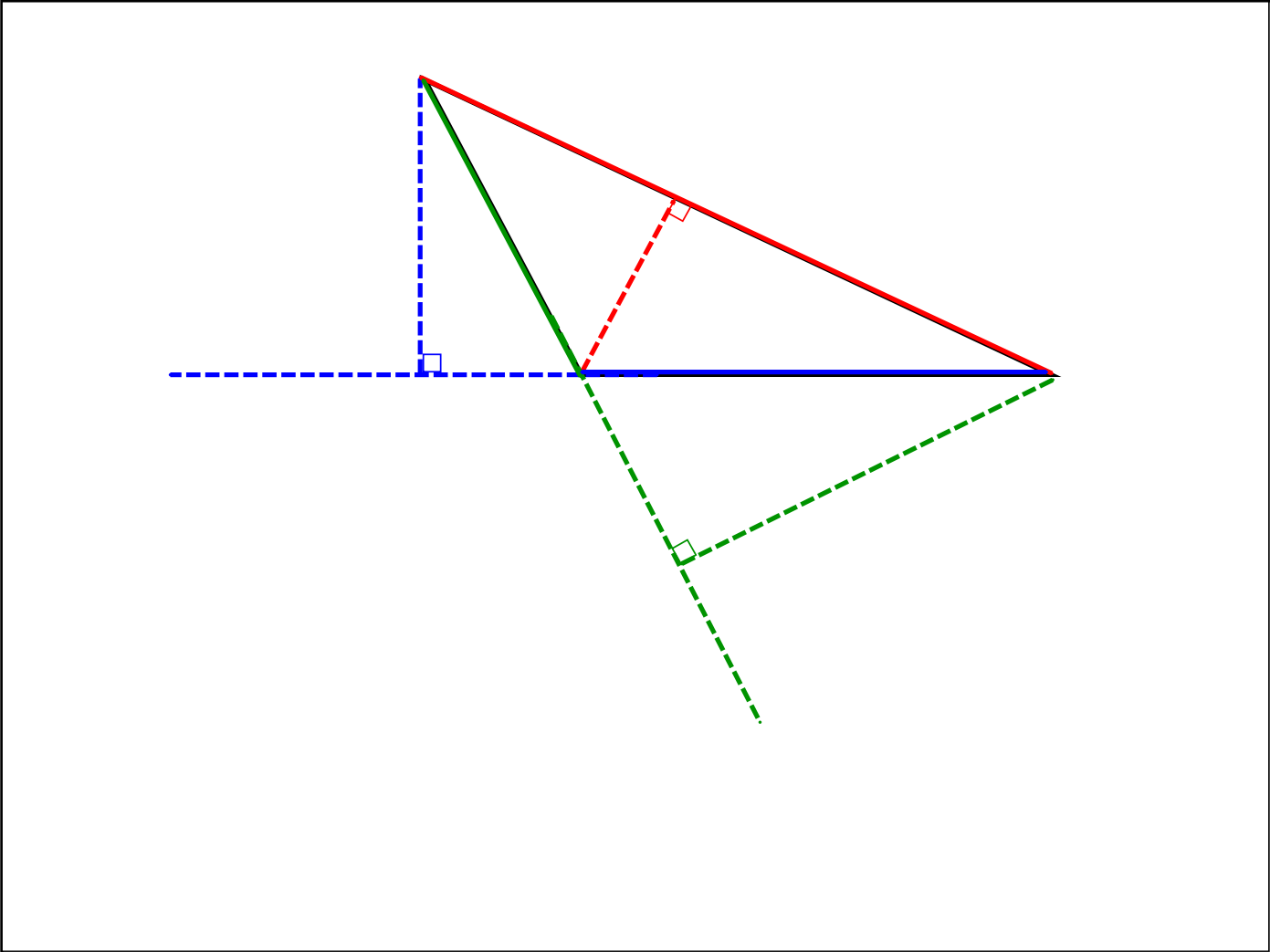
$$m \overline{EA} = 5.84 \text{ cm}$$

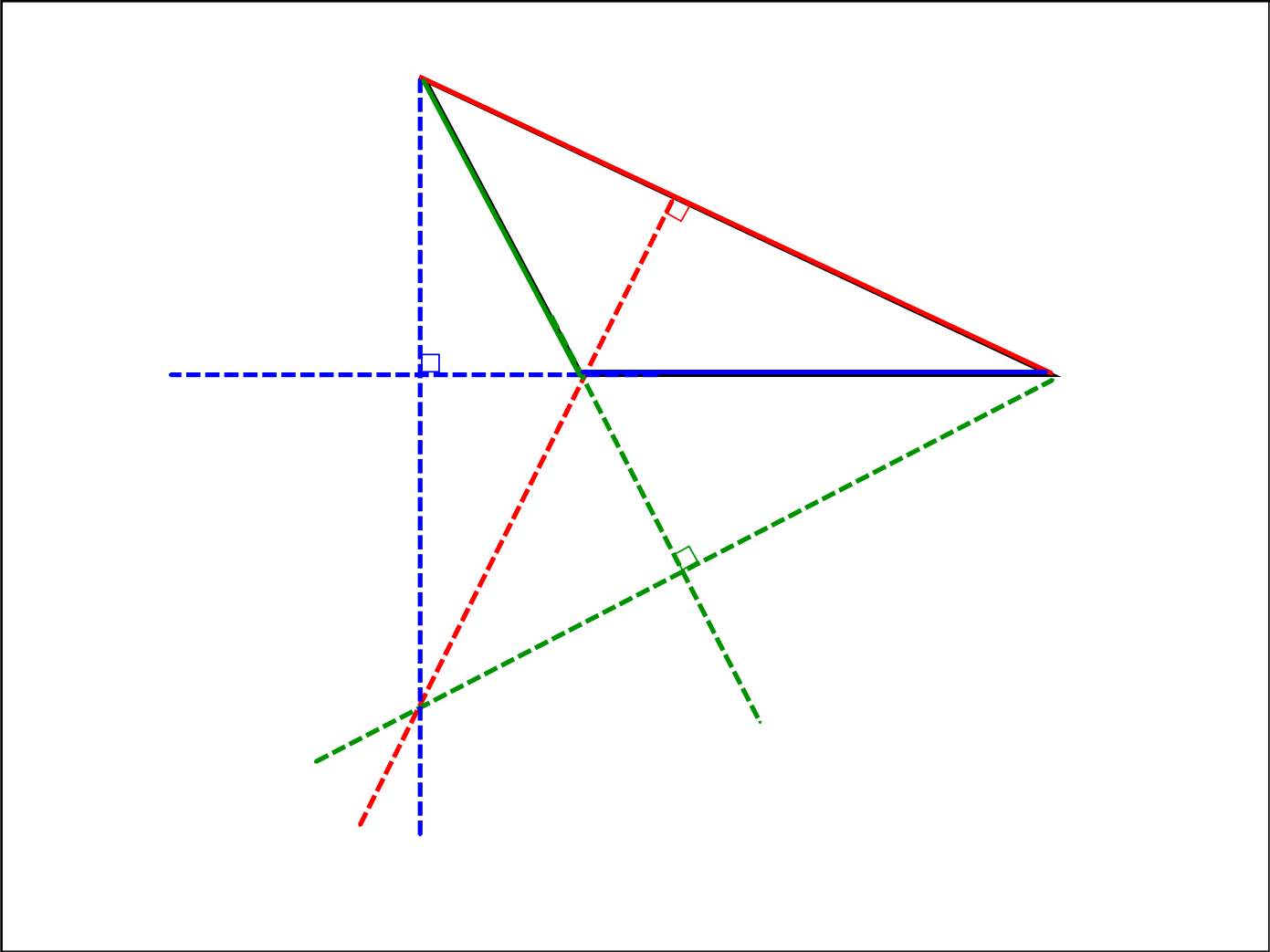
$$0.5 \cdot m \overline{BD} \cdot m \overline{EA} = 30.77 \text{ cm}^2$$

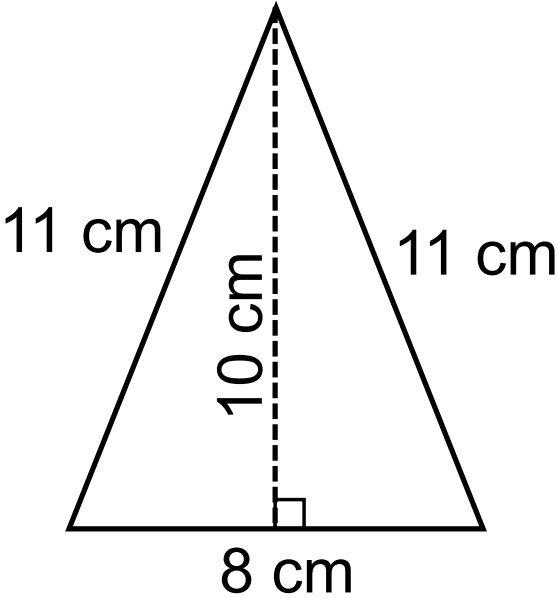


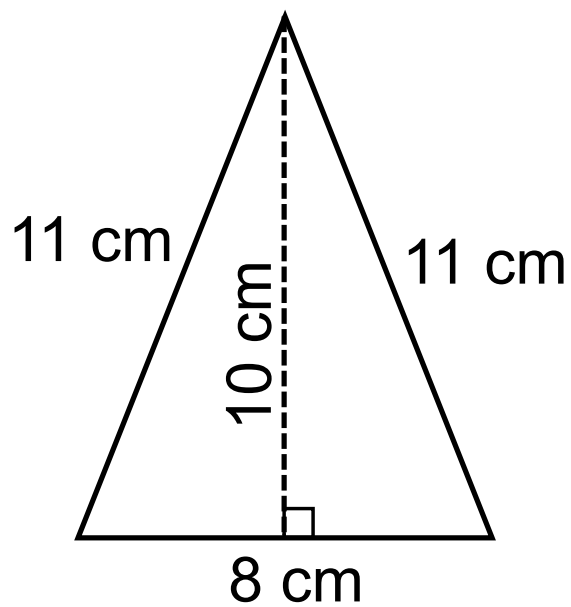




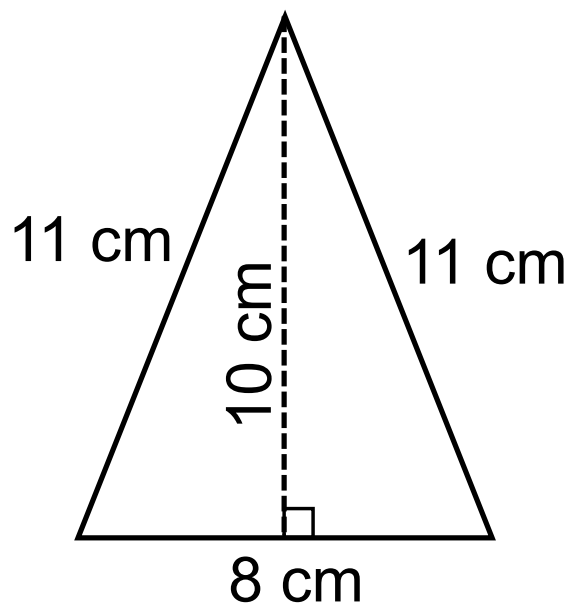






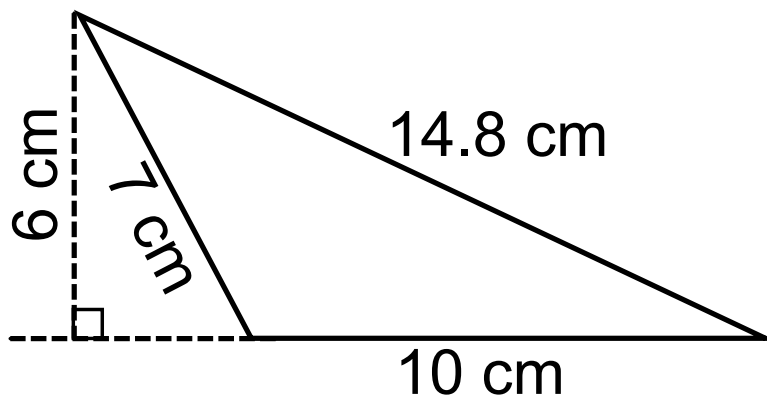


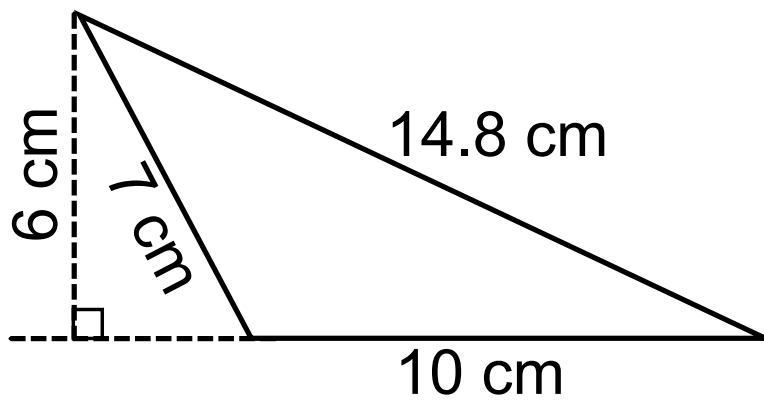
$$\text{Perimeter} = 11 \text{ cm} + 11 \text{ cm} + 8 \text{ cm} = 30 \text{ cm}$$



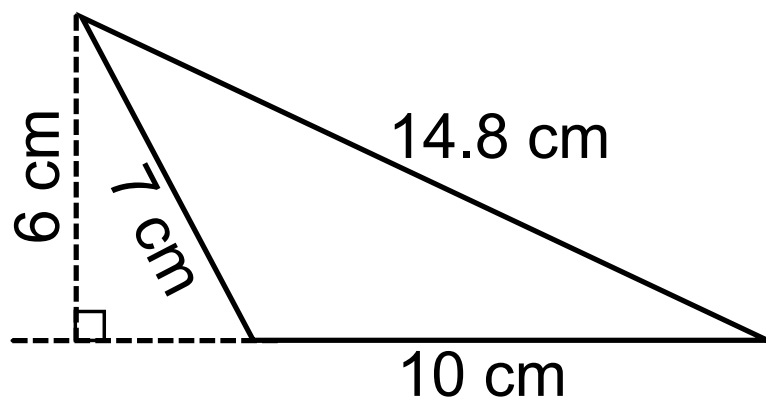
$$\text{Perimeter} = 11 \text{ cm} + 11 \text{ cm} + 8 \text{ cm} = 30 \text{ cm}$$

$$\text{Area} = 0.5 \cdot 8 \text{ cm} \cdot 10 \text{ cm} = 40 \text{ cm}^2$$



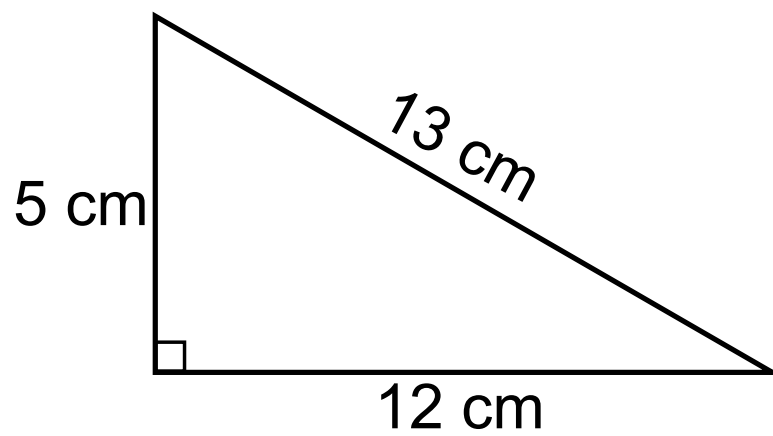


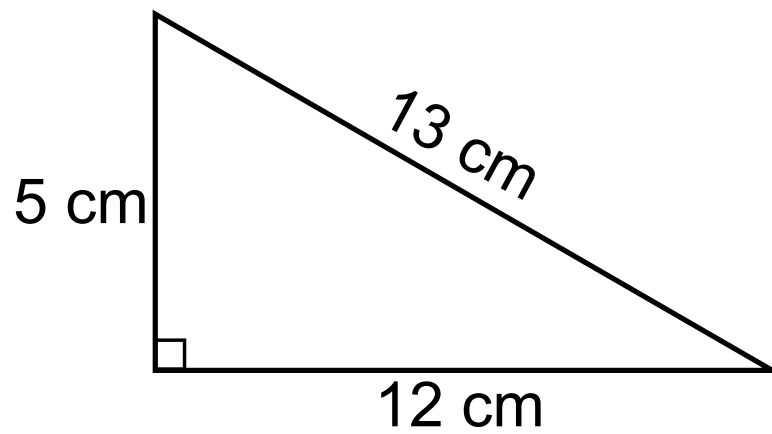
$$\text{Perimeter} = 10 \text{ cm} + 14.8 \text{ cm} + 7 \text{ cm} = 31.8 \text{ cm}$$



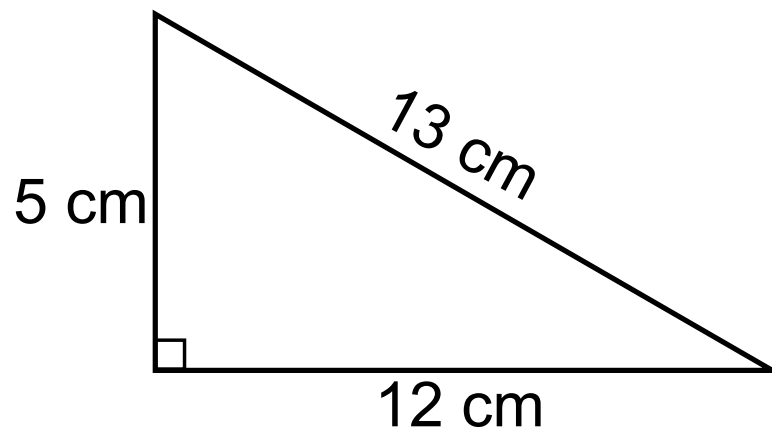
$$\text{Perimeter} = 10 \text{ cm} + 14.8 \text{ cm} + 7 \text{ cm} = 31.8 \text{ cm}$$

$$\text{Area} = 0.5 \cdot 10 \text{ cm} \cdot 6 \text{ cm} = 30 \text{ cm}^2$$





$$\text{Perimeter} = 5 \text{ cm} + 12 \text{ cm} + 13 \text{ cm} = 30 \text{ cm}$$



$$\text{Perimeter} = 5 \text{ cm} + 12 \text{ cm} + 13 \text{ cm} = 30 \text{ cm}$$

$$\text{Area} = 0.5 \cdot 5 \text{ cm} \cdot 12 \text{ cm} = 30 \text{ cm}^2$$

The formula for
the area of a
triangle is:

$$A = \frac{1}{2}bh$$

Any of the three sides of a triangle may be used as the base. There is a different height for each base.

Another word sometimes used for height is *altitude*.