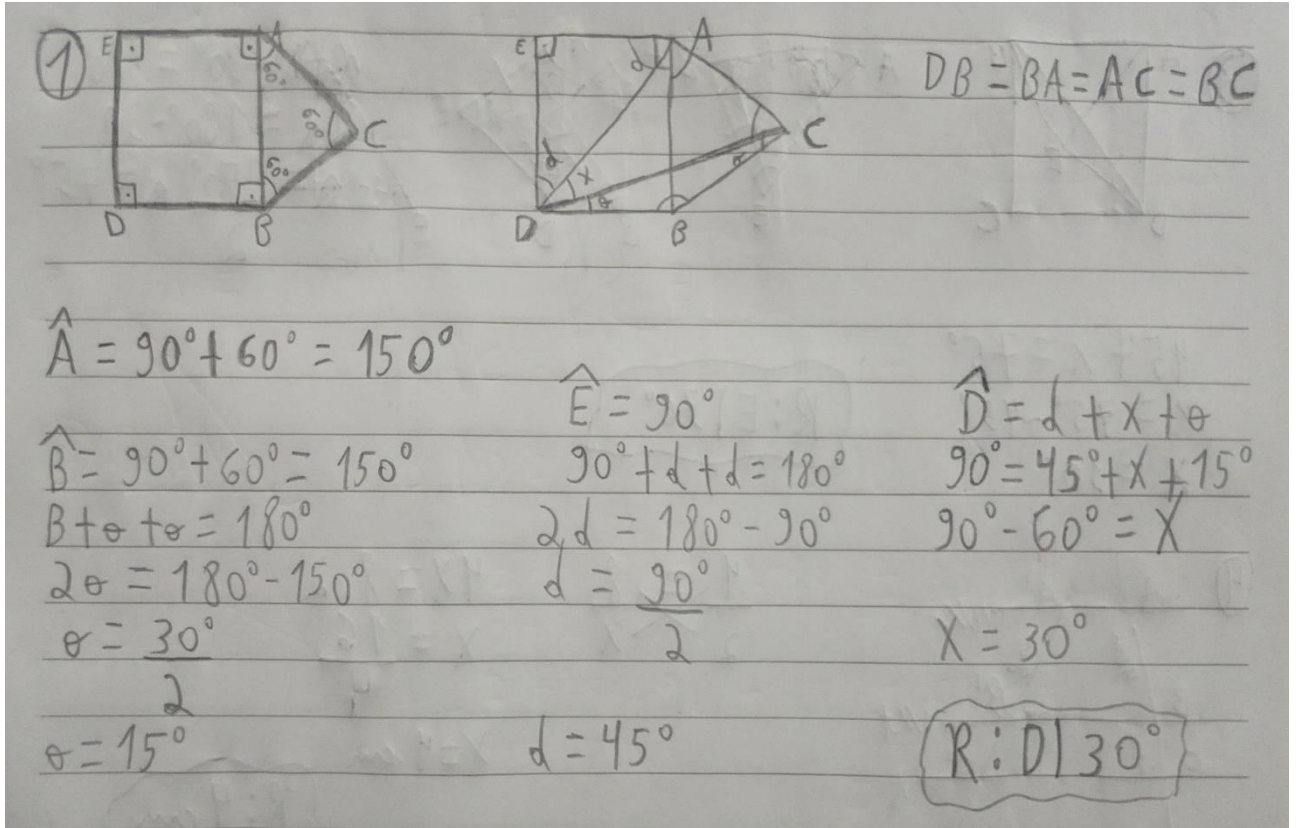


Quadriláteros Notáveis, Teorema de Tales, Teorema da Bissetriz Interna:

1.



The image shows two hand-drawn diagrams on lined paper. The left diagram shows a rectangle DEBC with an equilateral triangle ABC attached to side BC. Angles are marked: 90° at D and E, 60° at B and C, and 150° at A. The right diagram shows the same setup but with diagonal DB drawn, and angles are labeled with variables: d for angle BDE, x for angle ADB, and theta for angle BDC. To the right of the diagrams, the text 'DB = BA = AC = BC' is written.

Below the diagrams, the following calculations are written:

$$\hat{A} = 90^\circ + 60^\circ = 150^\circ$$

$$\hat{B} = 90^\circ + 60^\circ = 150^\circ$$

$$\hat{B} + \theta + \theta = 180^\circ$$

$$2\theta = 180^\circ - 150^\circ$$

$$\theta = \frac{30^\circ}{2}$$

$$\theta = 15^\circ$$

$$\hat{E} = 90^\circ$$

$$90^\circ + d + d = 180^\circ$$

$$2d = 180^\circ - 90^\circ$$

$$d = \frac{90^\circ}{2}$$

$$d = 45^\circ$$

$$\hat{D} = d + x + \theta$$

$$90^\circ = 45^\circ + x + 15^\circ$$

$$90^\circ - 60^\circ = x$$

$$x = 30^\circ$$

The final result is circled and labeled: **R: D | 30°**

R: d) 30°

2.

②

$\hat{A} = 60^\circ$
 $\hat{B} \text{ \& } \hat{C} = 150^\circ$
 $\hat{D} \text{ \& } \hat{E} = 90^\circ$

$\theta + \theta + 150^\circ = 180^\circ$
 $2\theta = 180^\circ - 150^\circ$
 $\theta = \frac{30^\circ}{2} = 15^\circ$

$x + 75^\circ + 45^\circ = 180^\circ$
 $x = 180^\circ - 120^\circ$
 $x = 60^\circ$

$x + F = 180^\circ$
 $F = 180^\circ - 60^\circ$
 $F = 120^\circ$

R: C | 120°

R: c) 120°

3.

③

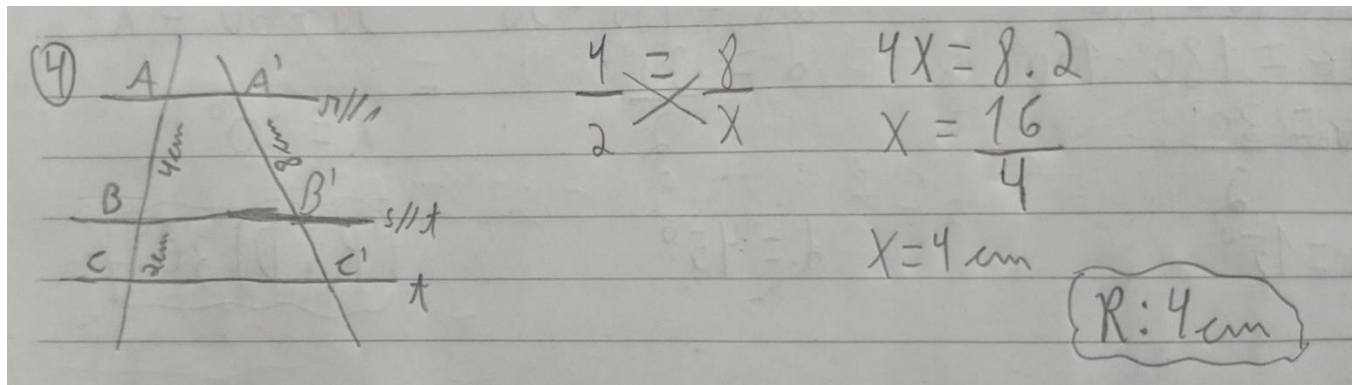
$a + a + 30^\circ = 180^\circ$
 $2a = 180^\circ - 30^\circ$
 $a = \frac{150^\circ}{2} = 75^\circ$

$45^\circ + x = 75^\circ$
 $x = 75^\circ - 45^\circ$
 $x = 30^\circ$

R: E | 30°

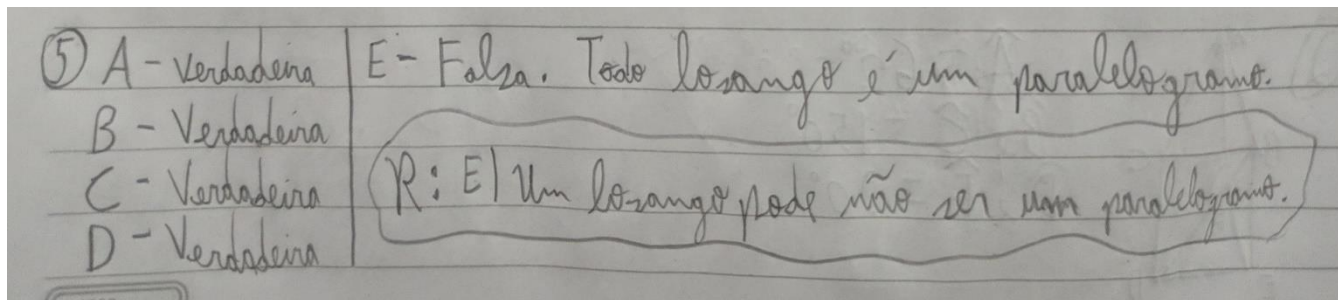
R: e) 30°

4.



R: 4cm.

5.



R: e) um losango pode não ser um paralelogramo

6.

⑥

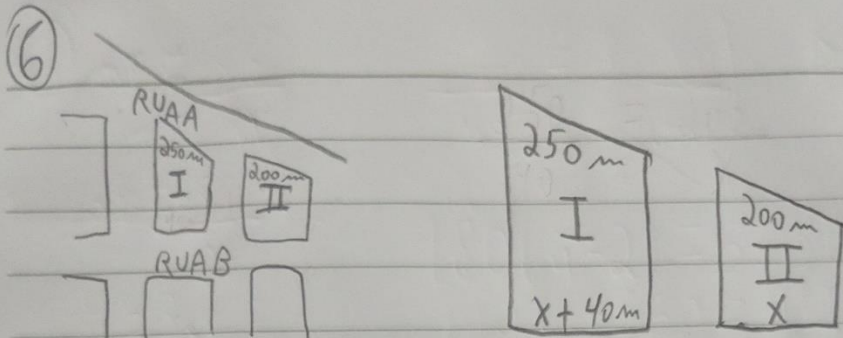


Diagram showing two trapezoidal plots, I and II, with dimensions and area calculations.

Plot I: Top width = 250m, Bottom width = $x + 40m$

Plot II: Top width = 200m, Bottom width = x

Area calculations:

$$250x = 200 \cdot (x + 40)$$

$$250x = 200x + 8000$$

$$250x - 200x = 8000$$

$$50x = 8000$$

$$x = \frac{8000}{50}$$

$$x = 160m$$

Area of Plot I: $250x$

Area of Plot II: $200(x + 40)$

Diagram labels: RUAA, RUAB

Equation: $\frac{250}{x+40} = \frac{200}{x}$

Result: **R: A1160**

R: a) 160