

GEO Ticket in the Door

Name: Key

1. 8
2. 9
3. 18
4. -8
5. 14
6. 4

1. Solve for the missing part. 3 parallel lines cut by 2 transversals.

Proportional parts

$$\frac{7}{4} = \frac{6}{3}$$

$$3x = 24$$

$$x = 8$$

2. Solve for x.

Proportional parts

$$\frac{1}{2} = \frac{x-1}{9-1}$$

$$x-1 = 8$$

$$x = 9$$

3. Find VT.

Midsegment of a Δ

$$9(2) = 18$$

4. Solve for x.

Midsegment of a Δ

$$2(2x+22) = x+20$$

$$4x+44 = x+20$$

$$3x+44 = 20$$

$$3x = -24$$

$$x = -8$$

5. Solve for x.

Right Triangle Similarity Theorem

$$\frac{7}{x} = \frac{x}{28}$$

$$x^2 = 196$$

$$x = 14$$

6. Solve for the missing side.

Triangle Bisector Theorem

$$\frac{x}{6} = \frac{2}{3}$$

$$3x = 12$$

$$x = 4$$

7. Solve for the missing side.

Triangle Bisector Theorem

$$\frac{x}{6} = \frac{2}{3}$$

$$3x = 12$$

$$x = 4$$