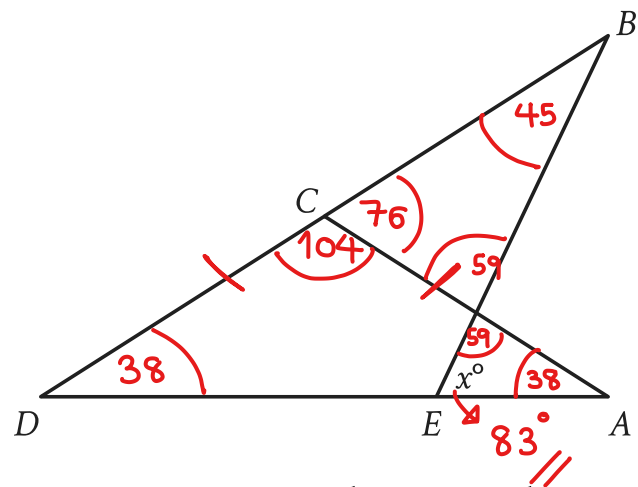


Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Lines, angles, and triangles	■ ■ ■

ID: 6d99b141

3.1



Note: Figure not drawn to scale.

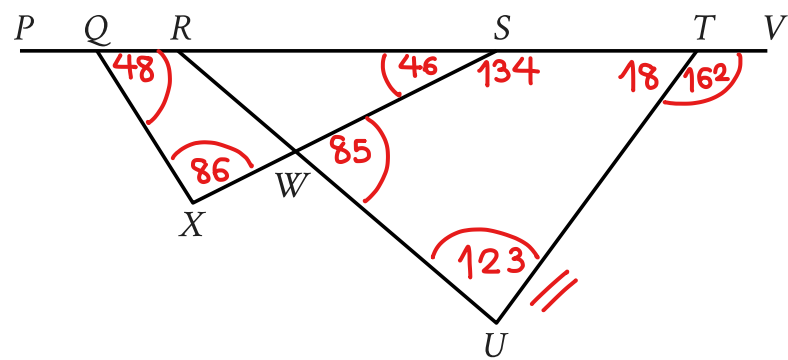
In the figure, $AC = CD$. The measure of angle EBC is 45° , and the measure of angle ACD is 104° . What is the value of x ?

Question ID e10d8313

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Lines, angles, and triangles	■ ■ ■

ID: e10d8313

3.2



Note: Figure not drawn to scale.

In the figure shown, points Q , R , S , and T lie on line segment PV , and line segment RU intersects line segment SX at point W . The measure of $\angle SQX$ is 48° , the measure of $\angle SXQ$ is 86° , the measure of $\angle SWU$ is 85° , and the measure of $\angle VTU$ is 162° . What is the measure, in degrees, of $\angle TUR$?

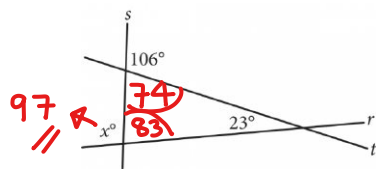
Question ID f88f27e5

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Lines, angles, and triangles	■ ■ ■

ID: f88f27e5

3.3

Intersecting lines r , s , and t are shown below.



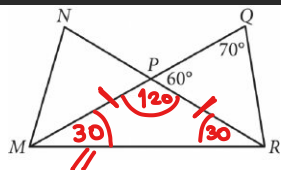
What is the value of x ?

Question ID 947a3cde

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Lines, angles, and triangles	■ ■ ■

ID: 947a3cde

3.4



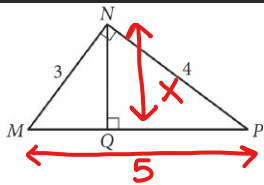
In the figure above, $\overline{MN}$ and $\overline{QR}$ intersect at point P , $NP = QP$, and $MP = PR$. What is the measure, in degrees, of $\angle QMR$? (Disregard the degree symbol when gridding your answer.)

Question ID 740bf79f

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Lines, angles, and triangles	■ ■ ■

ID: 740bf79f

3.5



In the figure above, what is the length of $\overline{NQ}$?

- A. 2.2
- B. 2.3
- ~~C. 2.4~~
- D. 2.5

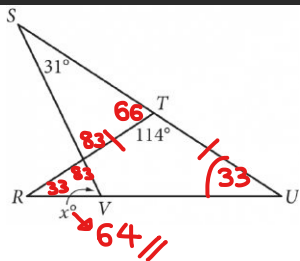
ଉତ୍ତର ~~X~~ = $\frac{3 \times 4}{5} = 2.4$

Question ID bd7f6e30

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Lines, angles, and triangles	■ ■ ■

ID: bd7f6e30

3.6



In the figure above, $RT = TU$.

What is the value of x ?

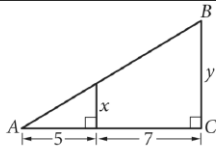
- A. 72
- B. 66
- ~~C. 64~~
- D. 58

Question ID eeb4143c

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Lines, angles, and triangles	■■■

ID: eeb4143c

3.7



Note: Figure not drawn to scale.

The area of triangle ABC above is at least 48 but no more than 60. If y is an integer, what is one possible value of x ?

$$48 \leq A_{ABC} \leq 60$$

$$A_{ABC} = \frac{1}{2} \times 12y = 6y$$

$$48 \leq 6y \leq 60$$

$$8 \leq y \leq 10$$

$$y = 8, 9, 10$$

$$\frac{x}{5} = \frac{y}{12} \rightarrow \text{แทนค่า } y$$

$$x = \frac{5y}{12}$$

$$x = \frac{10}{3}, 3.75, \frac{25}{6}$$

$\frac{15}{4}$

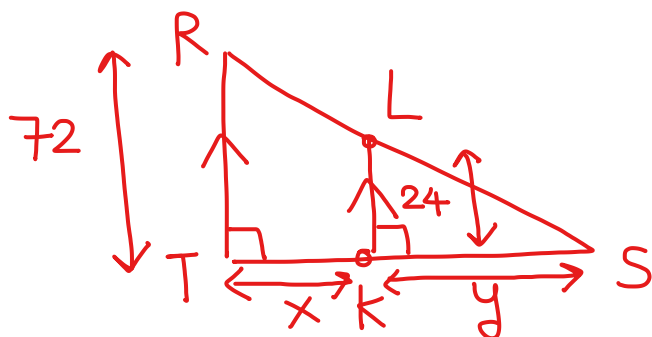
Question ID 5b4757df

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Lines, angles, and triangles	■ ■ ■

ID: 5b4757df

3.8

In triangle RST , angle T is a right angle, point L lies on $\overline{RS}$, point K lies on $\overline{ST}$, and $\overline{LK}$ is parallel to $\overline{RT}$. If the length of $\overline{RT}$ is 72 units, the length of $\overline{LK}$ is 24 units, and the area of triangle RST is 792 square units, what is the length of $\overline{KT}$, in units?



$$\left(\frac{72}{24}\right)^2 = \frac{792}{A_{LKS}}$$

$$A_{LKS} = 88$$

$$\frac{1}{2} \times \overset{12}{\cancel{24}} y = 88$$

$$y = \frac{22}{3}$$

$$\frac{72}{24} = \frac{x + y}{y}$$

$$\frac{72}{24} = \frac{x + \frac{22}{3}}{\frac{22}{3}}$$

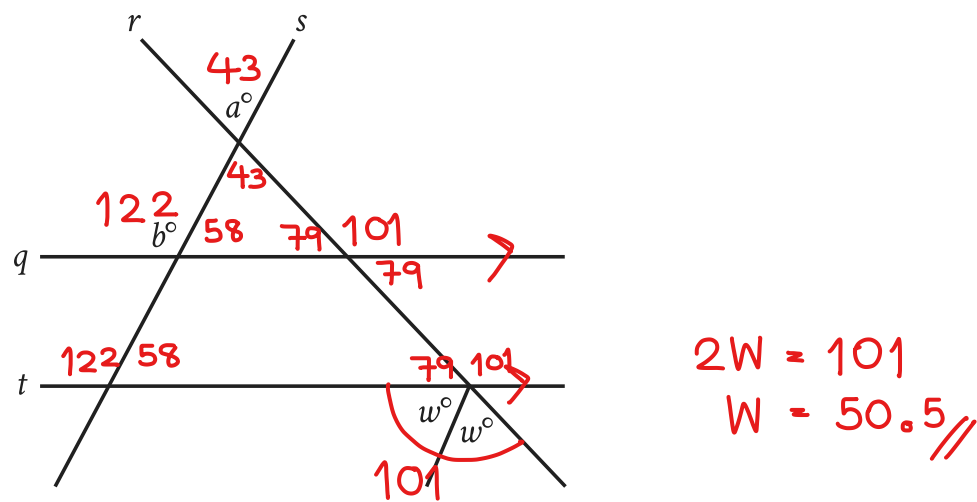
$$x = \frac{44}{3} //$$

Question ID 17912810

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Lines, angles, and triangles	■ ■ ■

ID: 17912810

3.9



Note: Figure not drawn to scale.

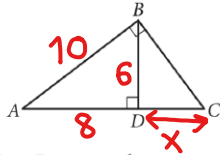
In the figure, parallel lines q and t are intersected by lines r and s . If $a = 43$ and $b = 122$, what is the value of w ?

Question ID 6a3fbec3

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Lines, angles, and triangles	■ ■ ■

ID: 6a3fbec3

3.10



Note: Figure not drawn to scale.

In the figure above, $BD = 6$ and $AD = 8$.

What is the length of $\overline{DC}$?

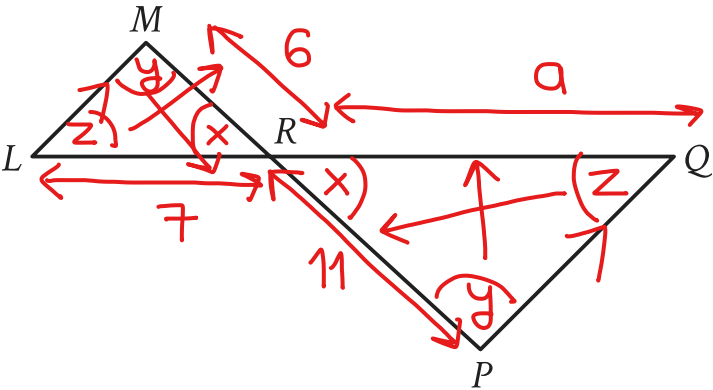
$$6 = \sqrt{8x}$$
$$x = 4.5 //$$

Question ID adae6543

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Lines, angles, and triangles	■ ■ ■

ID: adae6543

3.11



$$\frac{6}{7} = \frac{11}{a}$$
$$a = \frac{77}{6}$$

$$LQ = 7 + \frac{77}{6}$$
$$= \frac{119}{6} //$$

Note: Figure not drawn to scale.

In the figure, $\overline{LQ}$ intersects $\overline{MP}$ at point R , and $\overline{LM}$ is parallel to $\overline{PQ}$. The lengths of $\overline{MR}$, $\overline{LR}$, and $\overline{RP}$ are 6, 7, and 11, respectively. What is the length of $\overline{LQ}$?

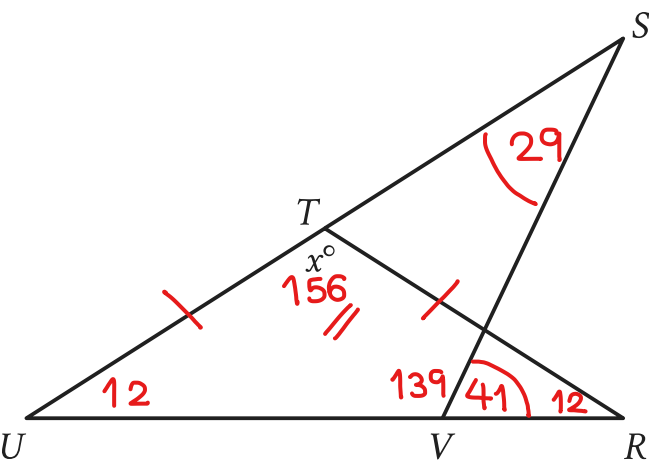
- A. $\frac{119}{11}$
- B. $\frac{77}{6}$
- C. $\frac{113}{6}$
- ~~D. $\frac{119}{6}$~~

Question ID 2d2cb85e

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Lines, angles, and triangles	■ ■ ■

ID: 2d2cb85e

3.12



Note: Figure not drawn to scale.

In the figure, $RT = TU$, the measure of angle VST is 29° , and the measure of angle RVS is 41° . What is the value of x ?

Question ID b1e1c2f5

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Lines, angles, and triangles	■ ■ ■

ID: b1e1c2f5

3.13

In right triangle ABC , angle C is the right angle and $BC = 162$. Point D on side AB is connected by a line segment with point E on side AC such that line segment DE is parallel to side BC and $CE = 2AE$. What is the length of line segment DE ?

