

# Question ID d9e83476

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

ID: d9e83476

Quadrilateral  $P'Q'R'S'$  is similar to quadrilateral  $PQRS$ , where  $P$ ,  $Q$ ,  $R$ , and  $S$  correspond to  $P'$ ,  $Q'$ ,  $R'$ , and  $S'$ , respectively. The measure of angle  $P$  is  $30^\circ$ , the measure of angle  $Q$  is  $50^\circ$ , and the measure of angle  $R$  is  $70^\circ$ . The length of each side of  $P'Q'R'S'$  is 3 times the length of each corresponding side of  $PQRS$ . What is the measure of angle  $P'$ ?

- A.  $10^\circ$
- B.  $30^\circ$
- C.  $40^\circ$
- D.  $90^\circ$

## Question ID b954d48e

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

**ID: b954d48e**

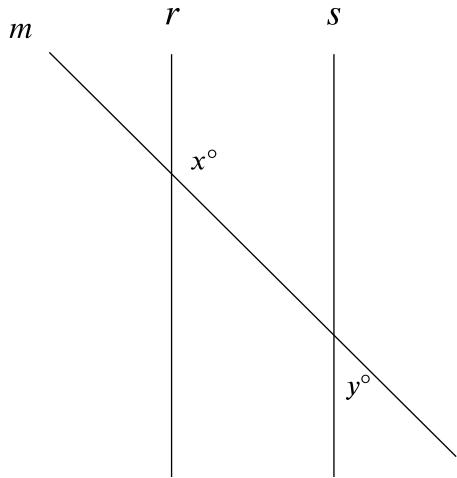
In triangle  $ABC$ , the measure of angle  $A$  is  $54^\circ$ , the measure of angle  $B$  is  $90^\circ$ , and the measure of angle  $C$  is  $(\frac{k}{2})^\circ$ . What is the value of  $k$ ?

- A. 36
- B. 45
- C. 72
- D. 108

# Question ID 681fe1cf

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

ID: 681fe1cf



Note: Figure not drawn to scale.

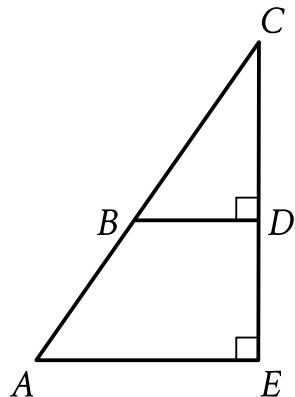
In the figure shown, lines  $r$  and  $s$  are parallel, and line  $m$  intersects both lines. If  $y < 65$ , which of the following must be true?

- A.  $x < 115$
- B.  $x > 115$
- C.  $x + y < 180$
- D.  $x + y > 180$

# Question ID 19cc1d6d

Assessment	Test	Domain	Skill	Difficulty
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ID: 19cc1d6d



Note: Figure not drawn to scale.

In the figure shown, triangle  $CAE$  is similar to triangle  $CBD$ . The measure of angle  $CBD$  is  $57^\circ$ , and  $AE = 26(BD)$ . What is the measure of angle  $CAE$ ?

- A.  $(26 \cdot 57)^\circ$
- B.  $(26 + 57)^\circ$
- C.  $57^\circ$
- D.  $26^\circ$

# Question ID 7eb3fa96

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

ID: 7eb3fa96

Right triangles  $LMN$  and  $PQR$  are similar, where  $L$  and  $M$  correspond to  $P$  and  $Q$ , respectively. Angle  $M$  has a measure of  $53^\circ$ . What is the measure of angle  $Q$ ?

- A.  $37^\circ$
- B.  $53^\circ$
- C.  $127^\circ$
- D.  $143^\circ$

## Question ID 875a6a8b

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

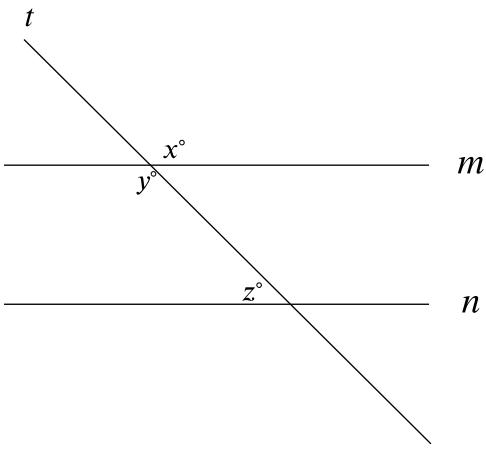
ID: 875a6a8b

Triangles  $ABC$  and  $DEF$  are congruent, where  $A$  corresponds to  $D$ , and  $B$  and  $E$  are right angles. The measure of angle  $A$  is  $69^\circ$ . What is the measure, in degrees, of angle  $F$ ?

# Question ID 8bca291d

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

ID: 8bca291d



Note: Figure not drawn to scale.

In the figure, lines  $m$  and  $n$  are parallel. If  $x = 6k + 13$  and  $y = 8k - 29$ , what is the value of  $z$ ?

- A. 3
- B. 21
- C. 41
- D. 139

# Question ID 0748d686

Assessment	Test	Domain	Skill	Difficulty
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**ID: 0748d686**

In triangle  $DEF$ , the measure of angle  $D$  is  $47^\circ$  and the measure of angle  $E$  is  $97^\circ$ . In triangle  $RST$ , the measure of angle  $R$  is  $47^\circ$  and the measure of angle  $S$  is  $97^\circ$ . Which of the following additional pieces of information is needed to determine whether triangle  $DEF$  is similar to triangle  $RST$ ?

- A. The measure of angle  $F$
- B. The measure of angle  $T$
- C. The measure of angle  $F$  and the measure of angle  $T$
- D. No additional information is needed.

## Question ID ba00aba9

Assessment	Test	Domain	Skill	Difficulty
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**ID: ba00aba9**

Two nearby trees are perpendicular to the ground, which is flat. One of these trees is **10** feet tall and has a shadow that is **5** feet long. At the same time, the shadow of the other tree is **2** feet long. How tall, in feet, is the other tree?

- A. **3**
- B. **4**
- C. **8**
- D. **27**

## Question ID 7ecb3059

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

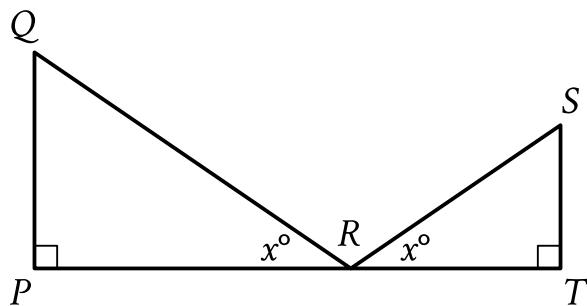
ID: 7ecb3059

In triangle  $JKL$ , the measures of  $\angle K$  and  $\angle L$  are each  $48^\circ$ . What is the measure of  $\angle J$ , in degrees? (Disregard the degree symbol when entering your answer.)

# Question ID 427423db

Assessment	Test	Domain	Skill	Difficulty
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ID: 427423db



Note: Figure not drawn to scale.

$\triangle QPR$  is similar to  $\triangle STR$ . The lengths represented by  $\overline{ST}$ ,  $\overline{QP}$ ,  $\overline{PR}$ , and  $\overline{QR}$  in the figure are 14, 15, 20, and 25, respectively. What is the length of  $\overline{SR}$ ?

- A.  $\frac{350}{15}$
- B.  $\frac{350}{20}$
- C.  $\frac{210}{20}$
- D.  $\frac{210}{25}$

## Question ID 48b69ecb

Assessment	Test	Domain	Skill	Difficulty
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**ID: 48b69ecb**

Each side of equilateral triangle S is multiplied by a scale factor of  $k$  to create equilateral triangle T. The length of each side of triangle T is greater than the length of each side of triangle S. Which of the following could be the value of  $k$ ?

A.  $\frac{29}{28}$

B. 1

C.  $\frac{28}{29}$

D. 0

## Question ID 338f0d42

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

ID: 338f0d42

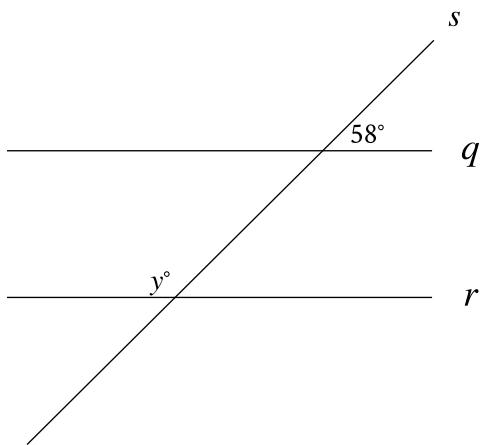
Triangle  $ABC$  is similar to triangle  $XYZ$ , where  $A$ ,  $B$ , and  $C$  correspond to  $X$ ,  $Y$ , and  $Z$ , respectively. In triangle  $ABC$ , the length of  $\overline{AB}$  is 170 and the length of  $\overline{BC}$  is 850. In triangle  $XYZ$ , the length of  $\overline{YZ}$  is 60. What is the length of  $\overline{XY}$ ?

- A. 204
- B. 182
- C. 60
- D. 12

# Question ID 14b418db

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

ID: 14b418db



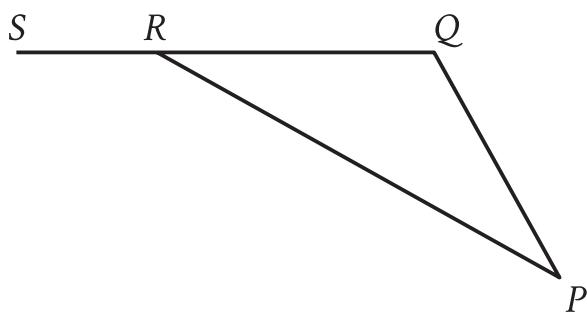
Note: Figure not drawn to scale.

In the figure, line  $q$  is parallel to line  $r$ , and both lines are intersected by line  $s$ . If  $y = 2x + 8$ , what is the value of  $x$ ?

# Question ID 26c126bb

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

ID: 26c126bb



Note: Figure not drawn to scale.

In triangle  $PQR$ ,  $\overline{QR}$  is extended to point  $S$ . The measure of  $\angle PQR$  is  $132^\circ$ , and the measure of  $\angle PRS$  is  $163^\circ$ . What is the measure of  $\angle QPR$ ?

- A.  $48^\circ$
- B.  $31^\circ$
- C.  $24^\circ$
- D.  $17^\circ$

## Question ID 35d7123b

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

ID: 35d7123b

Triangle  $ABC$  is similar to triangle  $XYZ$ , such that  $A$ ,  $B$ , and  $C$  correspond to  $X$ ,  $Y$ , and  $Z$  respectively. The length of each side of triangle  $XYZ$  is 2 times the length of its corresponding side in triangle  $ABC$ . The measure of side  $AB$  is 16. What is the measure of side  $XY$ ?

- A. 14
- B. 16
- C. 18
- D. 32