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°, the measure of angle Q is 50°, and the measure of angle R is 70°. 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°

B. 30°

C. 40°

D. 90°

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°, the measure of angle B is 90°, and the measure of angle C is $\left(\frac{k}{2}\right)^\circ$. What is the value of k?

A. 36

B. 45

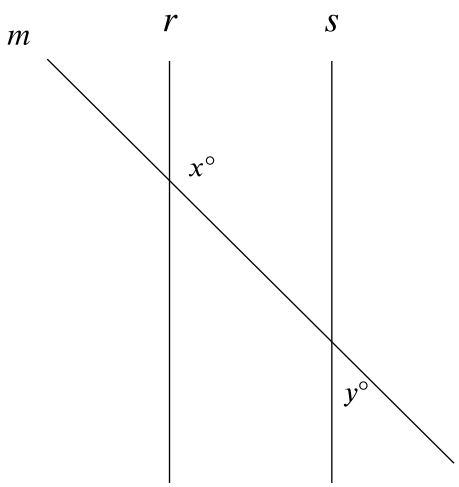
C. 72

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. $x > 115$

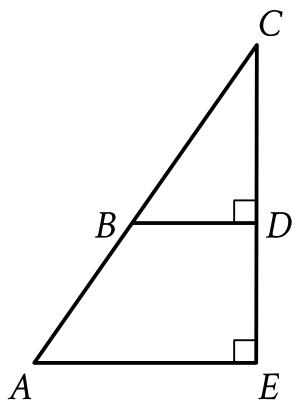
C. $x + y < 180$

D. $x + y > 180$

Question ID 19cc1d6d

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

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°, and $AE = 26(BD)$. What is the measure of angle CAE?

A. $(26 \cdot 57)^\circ$

B. $(26 + 57)^\circ$

C. 57°

D. 26°

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°. What is the measure of angle Q?

A. 37°

B. 53°

C. 127°

D. 143°

Question ID 875a6a8b

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

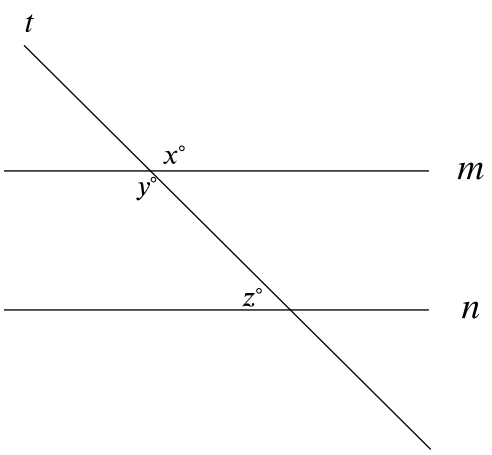
ID: 875a6a8b

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°. 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
SAT	Math	Geometry and Trigonometry	Lines, angles, and triangles	Medium

ID: 0748d686

In triangle DEF, the measure of angle D is 47° and the measure of angle E is 97°. In triangle RST, the measure of angle R is 47° and the measure of angle S is 97°. 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
SAT	Math	Geometry and Trigonometry	Lines, angles, and triangles	Medium

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

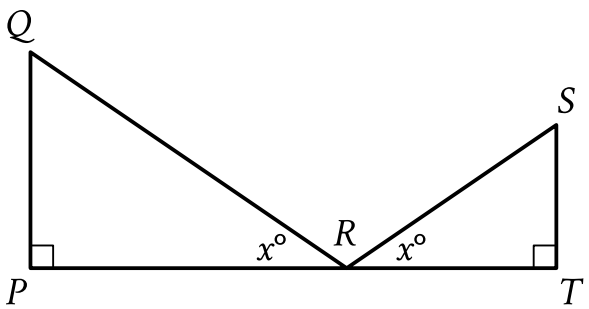
ID: 7ecb3059

In triangle JKL, the measures of $\angle K$ and $\angle L$ are each 48°. 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
SAT	Math	Geometry and Trigonometry	Lines, angles, and triangles	Medium

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
SAT	Math	Geometry and Trigonometry	Lines, angles, and triangles	Medium

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

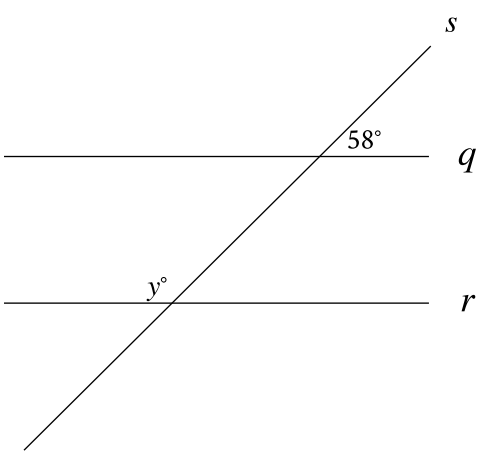
C. 60

D. 12

Question ID 14b418db

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

ID: 14b418db



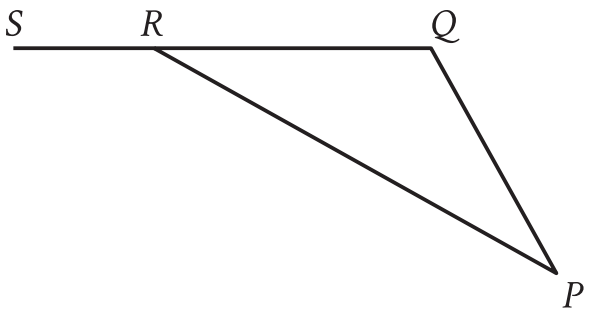
Note: Figure not drawn to scale.

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°, and the measure of $\angle PRS$ is 163°. What is the measure of $\angle QPR$?

A. 48°

B. 31°

C. 24°

D. 17°

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