Question Bank

Math

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Right Triangles and Trigonometry

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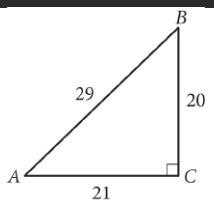
Question ID 902dc959

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Right triangles and trigonometry	■■□

ID: 902dc959



In the figure above, what is the value of $\tan(A)$?

A. $\frac{20}{29}$

B. $\frac{21}{29}$

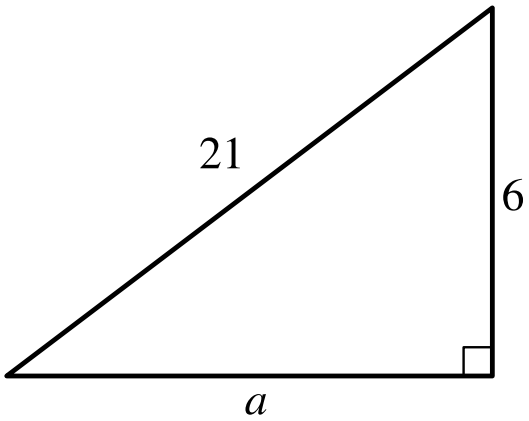
C. $\frac{20}{21}$

D. $\frac{21}{20}$

Question ID de550be0

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Right triangles and trigonometry	■■□

ID: de550be0



Note: Figure not drawn to scale.

For the triangle shown, which expression represents the value of a?

A. $\sqrt{21^2 - 6^2}$

B. $21^2 - 6^2$

C. $\sqrt{21 - 6}$

D. $21 - 6$

Question ID 9ec76b54

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Right triangles and trigonometry	■■□

ID: 9ec76b54

A right triangle has legs with lengths of 28 centimeters and 20 centimeters. What is the length of this triangle's hypotenuse, in centimeters?

A. $8\sqrt{6}$

B. $4\sqrt{74}$

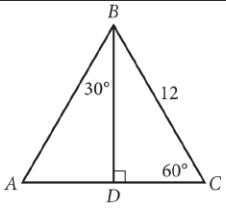
C. 48

D. $1{,}184$

Question ID bf8d843e

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Right triangles and trigonometry	■■□

ID: bf8d843e



In ΔABC above, what is the length of $\overline{AD}$?

A. 4

B. 6

C. $6\sqrt{2}$

D. $6\sqrt{3}$

Question ID a5aee181

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Right triangles and trigonometry	■■□

ID: a5aee181

The length of a rectangle's diagonal is $5\sqrt{17}$, and the length of the rectangle's shorter side is 5. What is the length of the rectangle's longer side?

A. $\sqrt{17}$

B. 20

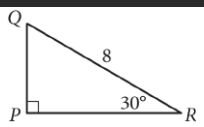
C. $15\sqrt{2}$

D. 400

Question ID 13d9a1c3

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Right triangles and trigonometry	■■□

ID: 13d9a1c3

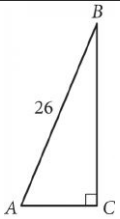


In the right triangle shown above, what is the length of $\overline{PQ}$?

Question ID bd87bc09

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Right triangles and trigonometry	■■■

ID: bd87bc09



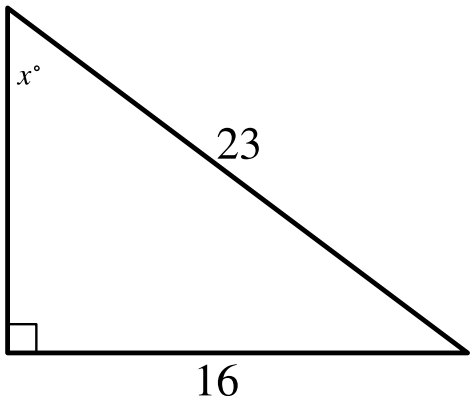
Triangle ABC above is a right triangle, and $\sin(B) = \frac{5}{13}$.

What is the length of side $\overline{BC}$?

Question ID 1429dcdf

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Right triangles and trigonometry	■■■

ID: 1429dcdf



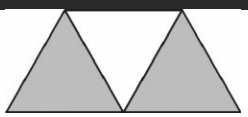
Note: Figure not drawn to scale.

In the triangle shown, what is the value of $\sin x^\circ$?

Question ID 4c95c7d4

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Right triangles and trigonometry	■■■

ID: 4c95c7d4



A graphic designer is creating a logo for a company. The logo is shown in the figure above. The logo is in the shape of a trapezoid and consists of three congruent equilateral triangles. If the perimeter of the logo is 20 centimeters, what is the combined area of the shaded regions, in square centimeters, of the logo?

A. $2\sqrt{3}$

B. $4\sqrt{3}$

C. $8\sqrt{3}$

D. 16

Question ID 55bb437a

Assessment	Test	Domain	Skill	Difficulty
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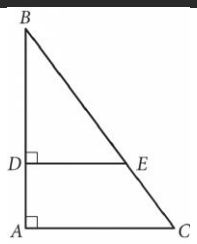
ID: 55bb437a

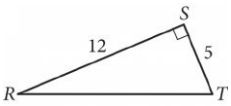


In the figure above, $\tan B = \frac{3}{4}$. If $BC = 15$ and $DA = 4$, what is the length of $\overline{DE}$?

Question ID 6933b3d9

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Right triangles and trigonometry	■■■

ID: 6933b3d9



In triangle *RST* above, point *W* (not shown) lies on $\overline{RT}$. What is the value of $\cos(\angle RSW) - \sin(\angle WST)$?

Question ID 6ab30ce3

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Right triangles and trigonometry	■■■

ID: 6ab30ce3

Triangle ABC is similar to triangle DEF, where A corresponds to D and C corresponds to F. Angles C and F are right angles. If $\tan(A) = \sqrt{3}$ and $DF = 125$, what is the length of $\overline{DE}$?

A. $125\frac{\sqrt{3}}{3}$

B. $125\frac{\sqrt{3}}{2}$

C. $125\sqrt{3}$

D. 250

Question ID 7c25b0dc

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Right triangles and trigonometry	■■■

ID: 7c25b0dc

The length of a rectangle's diagonal is $3\sqrt{17}$, and the length of the rectangle's shorter side is 3. What is the length of the rectangle's longer side?

Question ID c6dff223

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Right triangles and trigonometry	■■■

ID: c6dff223

Triangle ABC is similar to triangle DEF, where angle A corresponds to angle D and angles C and F are right angles. The length of $\overline{AB}$ is 2.9 times the length of $\overline{DE}$. If $\tan A = \frac{21}{20}$, what is the value of $\sin D$?

Question ID 92eb236a

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Right triangles and trigonometry	■■■

ID: 92eb236a

In a right triangle, the tangent of one of the two acute angles is $\frac{\sqrt{3}}{3}$. What is the tangent of the other acute angle?

A. $-\frac{\sqrt{3}}{3}$

B. $-\frac{3}{\sqrt{3}}$

C. $\frac{\sqrt{3}}{3}$

D. $\frac{3}{\sqrt{3}}$

Question ID 2be01bd9

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Right triangles and trigonometry	■■■

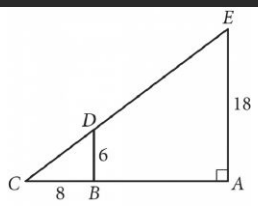
ID: 2be01bd9

Triangle ABC is similar to triangle DEF, where angle A corresponds to angle D and angle C corresponds to angle F. Angles C and F are right angles. If $\tan(A) = \frac{50}{7}$, what is the value of $\tan(E)$?

Question ID dba6a25a

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Right triangles and trigonometry	■■■

ID: dba6a25a



In the figure above, $\overline{BD}$ is parallel to $\overline{AE}$.

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

Question ID 25da87f8

Assessment	Test	Domain	Skill	Difficulty
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ID: 25da87f8

A triangle with angle measures 30°, 60°, and 90° has a perimeter of $18+6\sqrt{3}$. What is the length of the longest side of the triangle?