REVOLUTION

SAT Geometry and Trig Homework Set A1

1
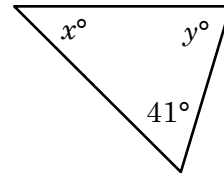
In a circle with a diameter of 90 inches, what is the length, in inches, of an arc on the circle with a central angle measure of 60° ?

A) 15π
B) 30π
C) 45π
D) 60π

2

The dimensions of a right rectangular prism are 6 inches by 8 inches by 14 inches. What is the surface area, in square inches, of the prism?
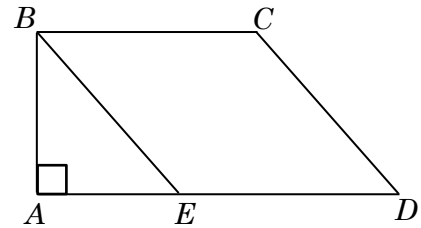
3

Note: Figure not drawn to scale.

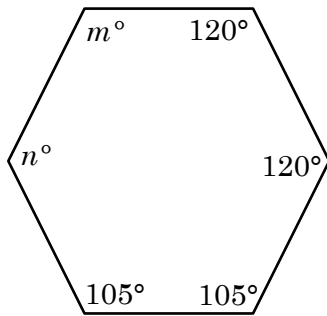In the triangle above, what is the value of $x + y$?

4

In the diagram above, ΔABE is an isosceles right triangle with an area of 2. If the sides of the parallelogram $BCDE$ all have equal length, what is the area of $BCDE$?

A) $2\sqrt{2}$
B) 4
C) $4\sqrt{2}$
D) 8

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What is the area of a trapezoid with bases of length 10 and 20 and a height of 15 ?

7

In the figure above, $x \parallel y$ and $b = 45°$. What is the value of $3a$? (Disregard the degree symbol in your answer.)
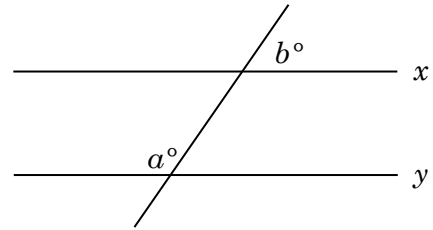
6

Note: Figure not drawn to scale.

In the figure above, what is the sum of m and n ? (Disregard the degree symbol in your answer.)

8
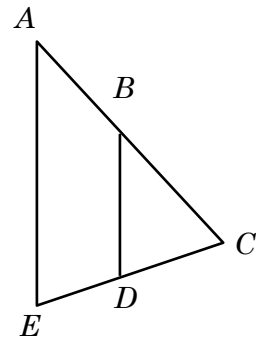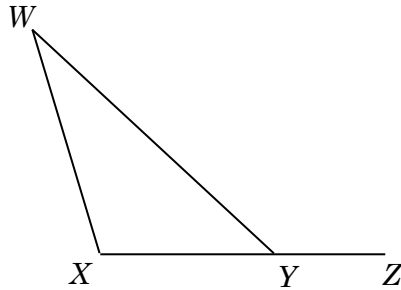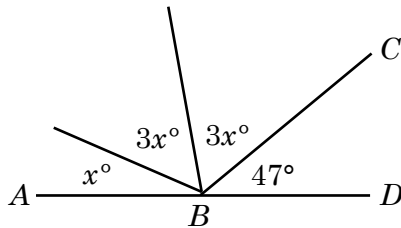

Note: Figure not drawn to scale.

In the figure above, segments AE and BD are parallel. If angle DBC measures 46° and angle ECA measures 57°, what is the measure, in degrees, of angle AEC ? (Disregard the degree symbol in your answer.)

9

In the figure above, ∠*XWY* measures 10°, ∠*WYZ* measures 125°, and points *X*, *Y*, and *Z* are collinear. What is the measure of ∠*WXY* ? (Disregard the degree symbol in your answer.)
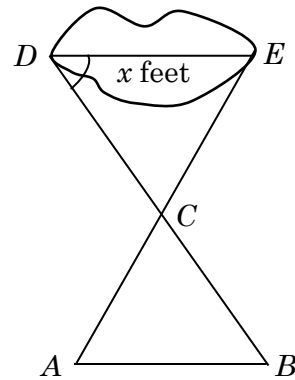
10


Note: Figure not drawn to scale.

In the figure above, point *B* lies on $\overline{AD}$. what is the value of 5*x* ?
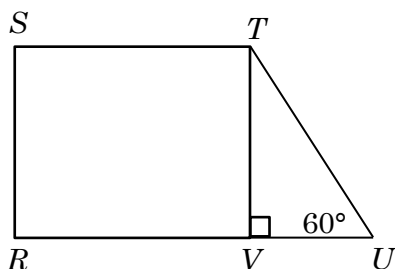
11

A golfer wants to find a length, *x*, in feet, of a sand trap as represented in the sketch above. The lengths represented by *AC*, *BC*, *DC*, and *AB* on the sketch were measured to be 500 feet, 400 feet, 200 feet, and 150 feet, respectively. Segments *AE* and *BD* intersect at *C*, and ∠*CDE* and ∠*CBA* have the same measure. What is the value of *x* ?
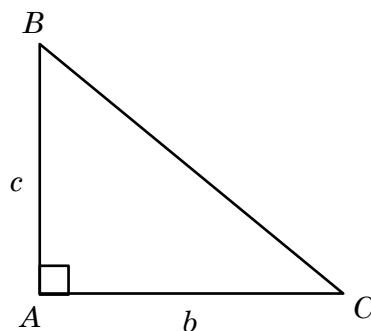
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12
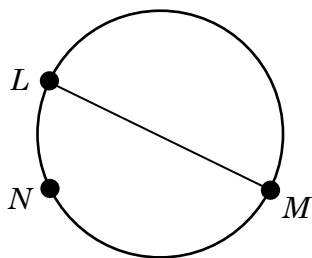
In the circle above, segment LM is a diameter. If the length of arc $\widehat{LNM}$ is 144π, what is the length of the radius of the circle?

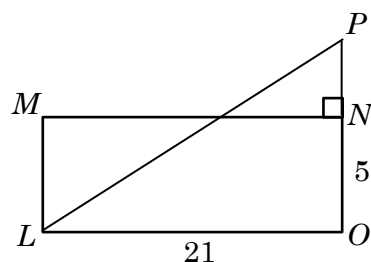**14**

Given the right triangle ABC above, which of the following is equal to $\dfrac{c}{b}$?

A) $\sin B$
B) $\tan B$
C) $\tan C$
D) $\cos C$

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In the figure above, $RSTV$ is a square and $TU = 6$. What is the area of $RSTV$?

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In the figure above, if the area of $\triangle OPL$ is equal to the area of the rectangle $LMNO$, what is the length of PN ?

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**SAT Geometry and Trig
A1 Answers**

1)   A
2)   488
3)   139
4)   C
5)   225
6)   270
7)   405
8)   77
9)   115
10) 95
11) 75
12) 144
13) 27
14) C
15) 5