Geometry
Daily Quiz 11142019

Question 1.

Circle O is represented by the equation $(x + 3)^2 + (y - 5)^2 = 48$. The coordinates of the center and the length of the radius of circle O are

(1) $(-3,5)$ and $4\sqrt{3}$

(2) $(-3,5)$ and 24

(3) $(3,-5)$ and $4\sqrt{3}$

(4) $(3,-5)$ and 24

Question 2.

What is the slope of a line perpendicular to the line whose equation is $3x - 7y + 14 = 0$?

(1) $\frac{3}{7}$

(2) $-\frac{7}{3}$

(3) 3

(4) $-\frac{1}{3}$

Question 3.

Line segment AB has endpoint A located at the origin. Line segment AB is longest when the coordinates of B are

(1) $(3,7)$

(2) $(2,-8)$

(3) $(-6,4)$

(4) $(-5,-5)$

Question 4.

In $\triangle FGH$, $m\angle F = m\angle H$, $GF = x + 40$, $HF = 3x - 20$, and $GH = 2x + 20$. The length of $\overline{GH}$ is

(1) 20

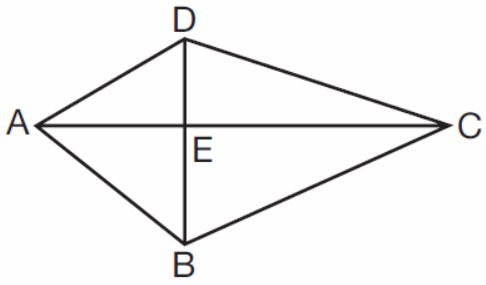
(2) 40

(3) 60

(4) 80

Question 5.

In the diagram below of quadrilateral $ABCD$, diagonals $\overline{AEC}$ and $\overline{BED}$ are perpendicular at E.



Which statement is always true based on the given information?

(1) $\overline{DE} \cong \overline{EB}$

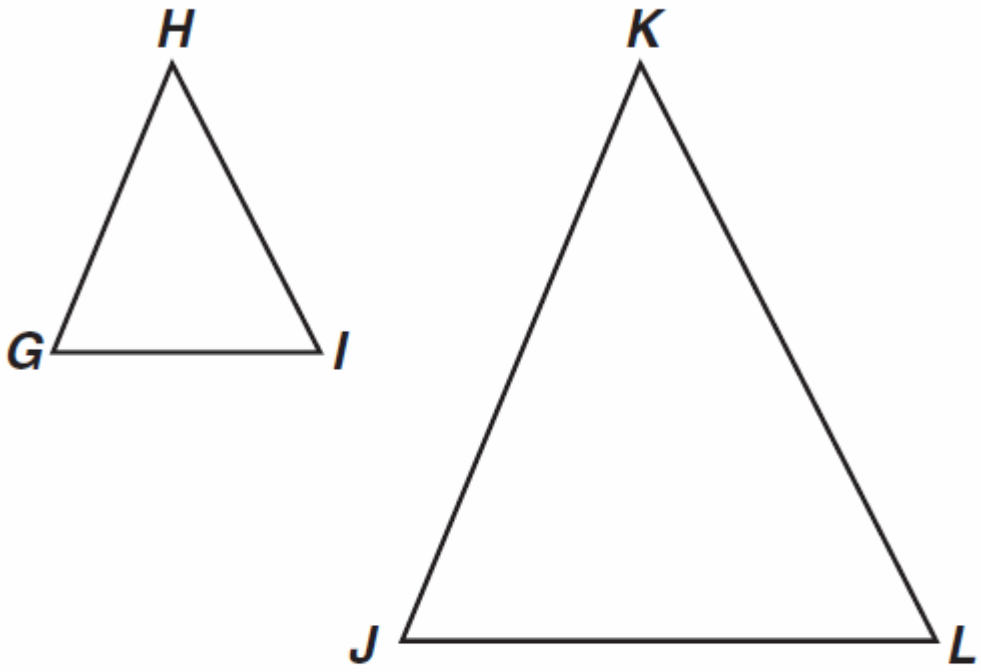
(2) $\overline{AD} \cong \overline{AB}$

(3) $\angle DAC \cong \angle BAC$

(4) $\angle AED \cong \angle CED$

Question 6.

Which of the following statements must be true if $\triangle GHI \sim \triangle JKL$?



A The two triangles must be scalene.

B The two triangles must have exactly one acute angle.

C At least one of the sides of the two triangles must be parallel.

D The corresponding sides of the two triangles must be proportional.

Question 7.
(Did I ever tell you that Google is your friend?)

Which method listed below could *not* be used to prove that two triangles are congruent?

A Prove all three sets of corresponding sides congruent.

B Prove all three sets of corresponding angles congruent.

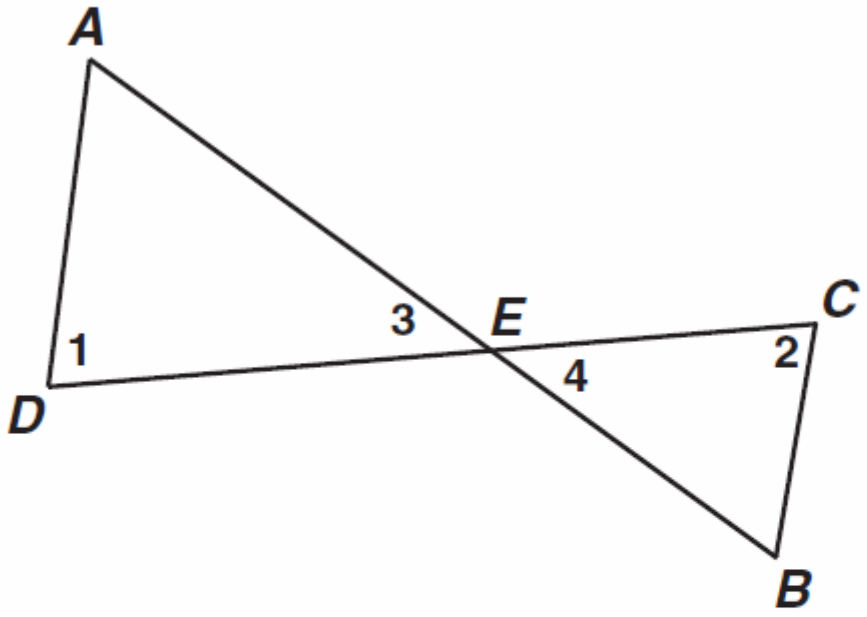
C Prove that two sides and an included angle of one triangle are congruent to two sides and an included angle of the other triangle.

D Prove that two angles and an included side of one triangle are congruent to two angles and an included side of the other triangle.

Question 8.

Given: $\overline{AB}$ and $\overline{CD}$ intersect at point E;

$$\angle 1 \cong \angle 2$$



Which theorem or postulate can be used to prove $\triangle AED \sim \triangle BEC$?

A AA

B SSS

C ASA

D SAS

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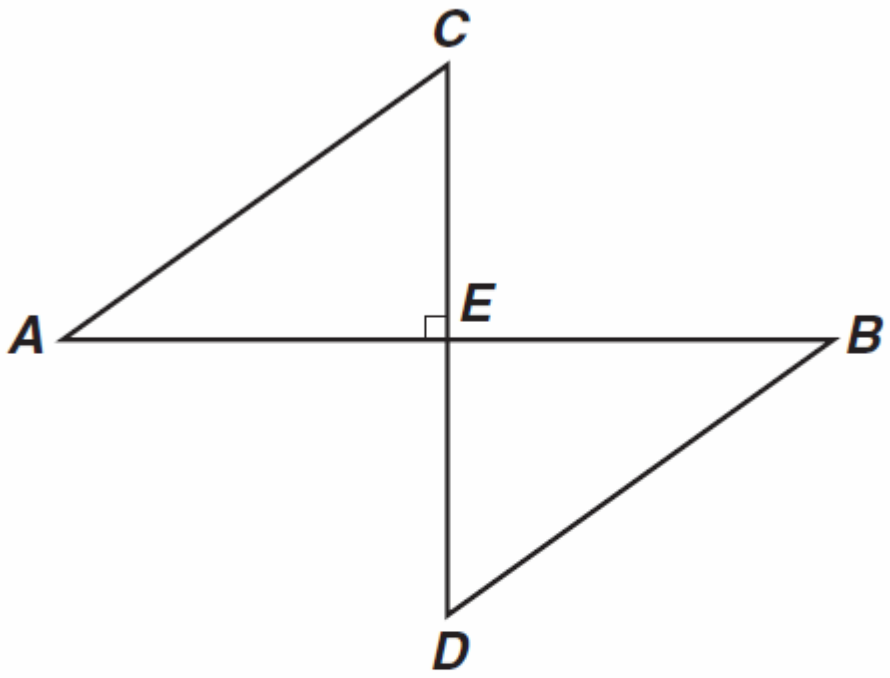
Question 9.

Given: E is the midpoint of $\overline{CD}$; $\angle C \cong \angle D$



Which of the following statements *must* be true?

A $\angle A \cong \angle D$

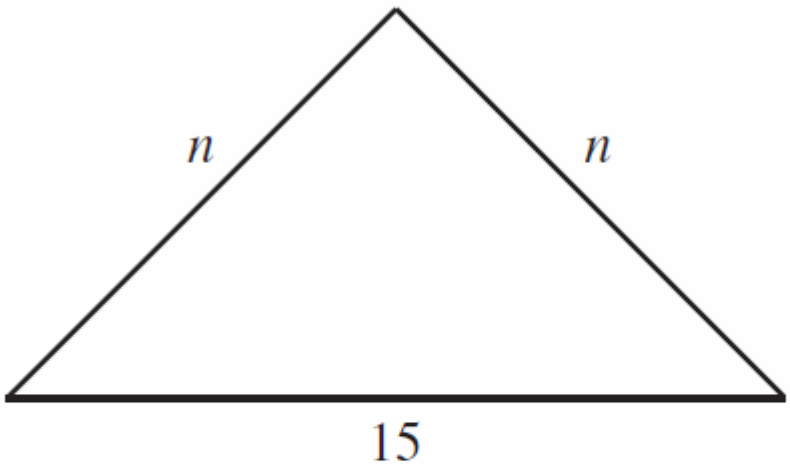
B $\angle B \cong \angle C$

C $\overline{CE} \cong \overline{BE}$

D $\overline{AC} \cong \overline{BD}$

Question 10.

In the figure below, n is a whole number. What is the *smallest* possible value for n?



A 1

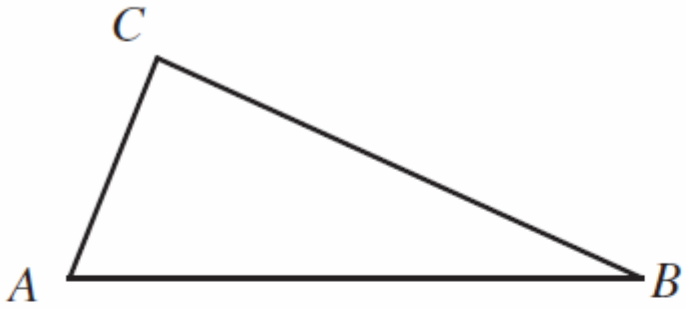
B 7

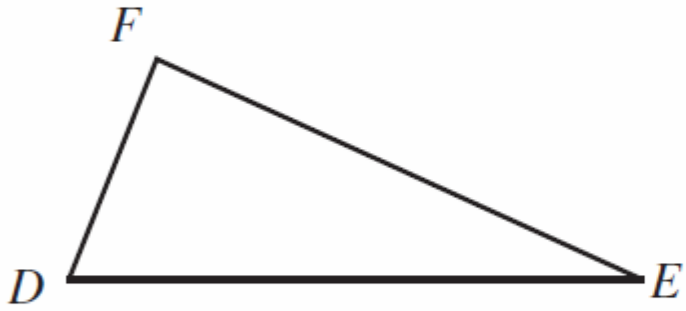
C 8

D 14

Bonus

In the figure below, $\overline{AC} \cong \overline{DF}$ and $\angle A \cong \angle D$.





Which additional information would be enough to prove that $\triangle ABC \cong \triangle DEF$?

A $\overline{AB} \cong \overline{DE}$

B $\overline{AB} \cong \overline{BC}$

C $\overline{BC} \cong \overline{EF}$

D $\overline{BC} \cong \overline{DE}$

PARCC
Partnership for Assessment of Readiness for College and Careers

High School Mathematics Assessment Reference Sheet

1 inch = 2.54 centimeters
1 meter = 39.37 inches
1 mile = 5280 feet
1 mile = 1760 yards
1 mile = 1.609 kilometers

1 kilometer = 0.62 mile
1 pound = 16 ounces
1 pound = 0.454 kilograms
1 kilogram = 2.2 pounds
1 ton = 2000 pounds

1 cup = 8 fluid ounces
1 pint = 2 cups
1 quart = 2 pints
1 gallon = 4 quarts
1 gallon = 3.785 liters
1 liter = 0.264 gallons
1 liter = 1000 cubic centimeters

Triangle	$A = \frac{1}{2}bh$
Parallelogram	$A = bh$
Circle	$A = \pi r^2$
Circle	$C = \pi d \ \ or \ \ C = 2\pi r$
General Prisms	$V = Bh$
Cylinder	$V = \pi r^2 h$
Sphere	$V = \frac{4}{3}\pi r^3$
Cone	$V = \frac{1}{3}\pi r^2 h$
Pyramid	$V = \frac{1}{3}Bh$

Quadratic Formula	$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$
Arithmetic Sequence	$a_n = a_1 + (n-1)d$
Geometric Sequence	$a_n = a_1 r^{n-1}$
Geometric Series	$S_n = \frac{a_1 - a_1 r^n}{1-r}$ where $r \neq 1$
Radians	1 radian $= \frac{180}{\pi}$ degrees
Degrees	1 degree $= \frac{\pi}{180}$ radians

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942260 1 2 3 4 5 A B C D E Printed in the USA ISD10957