Geometry
Daily Quiz 11252019

Question 1.

The vertices of parallelogram $ABCD$ are $A(2,0)$, $B(0,-3)$, $C(3,-3)$, and $D(5,0)$. If $ABCD$ is reflected over the x-axis, how many vertices remain invariant?

(1) 1
(2) 2
(3) 3
(4) 0

Question 2.

Point M is the midpoint of $\overline{AB}$. If the coordinates of A are $(-3,6)$ and the coordinates of M are $(-5,2)$, what are the coordinates of B?

(1) $(1,2)$
(2) $(7,10)$
(3) $(-4,4)$
(4) $(-7,-2)$

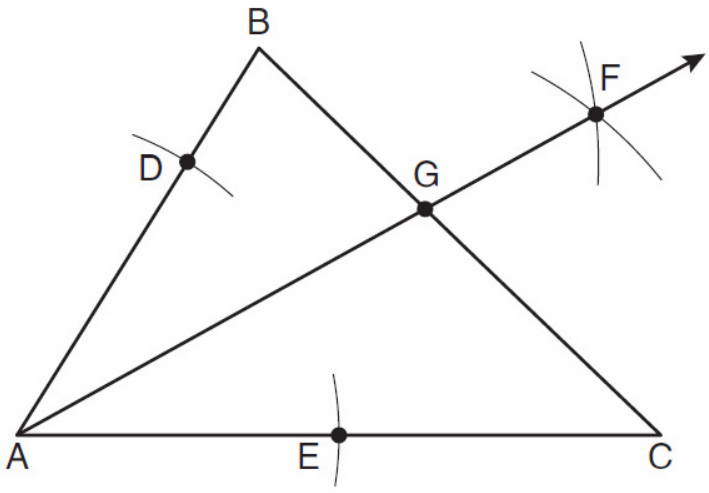
Question 3.

When a dilation is performed on a hexagon, which property of the hexagon will *not* be preserved in its image?

(1) parallelism
(2) orientation
(3) length of sides
(4) measure of angles

Question 4.

As shown in the diagram below of $\triangle ABC$, a compass is used to find points D and E, equidistant from point A. Next, the compass is used to find point F, equidistant from points D and E. Finally, a straight-edge is used to draw $\overrightarrow{AF}$. Then, point G, the intersection of $\overrightarrow{AF}$ and side $\overline{BC}$ of $\triangle ABC$, is labeled.



Which statement must be true?

(1) $\overrightarrow{AF}$ bisects side $\overline{BC}$

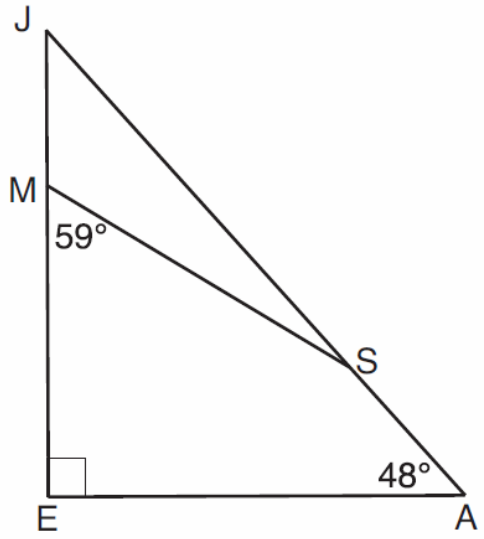
(2) $\overrightarrow{AF}$ bisects $\angle BAC$

(3) $\overrightarrow{AF} \perp \overline{BC}$

(4) $\triangle ABG \sim \triangle ACG$

Question 5.

In the diagram of $\triangle JEA$ below, $m\angle JEA = 90$ and $m\angle EAJ = 48$. Line segment MS connects points M and S on the triangle, such that $m\angle EMS = 59$.

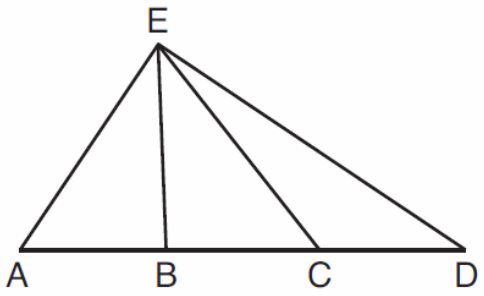


What is $m\angle JSM$?

(1) 163
(2) 121
(3) 42
(4) 17

Question 6.

In $\triangle AED$ with $\overline{ABCD}$ shown in the diagram below, $\overline{EB}$ and $\overline{EC}$ are drawn.



If $\overline{AB} \cong \overline{CD}$, which statement could always be proven?

(1) $\overline{AC} \cong \overline{DB}$
(2) $\overline{AE} \cong \overline{ED}$
(3) $\overline{AB} \cong \overline{BC}$
(4) $\overline{EC} \cong \overline{EA}$

Question 7.

A right triangle's hypotenuse has length 5. If one leg has length 2, what is the length of the other leg?

A 3

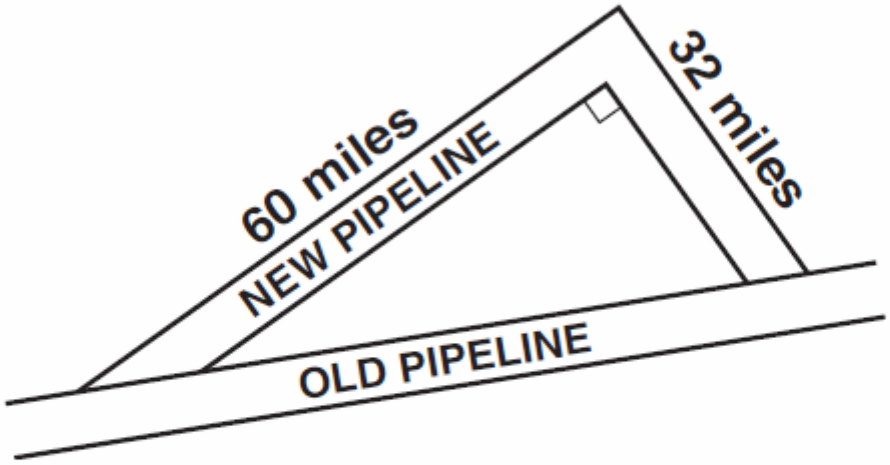
B $\sqrt{21}$

C $\sqrt{29}$

D 7

Question 8.

A new pipeline is being constructed to re-route its oil flow around the exterior of a national wildlife preserve. The plan showing the old pipeline and the new route is shown below.



About how many extra miles will the oil flow once the new route is established?

A 24

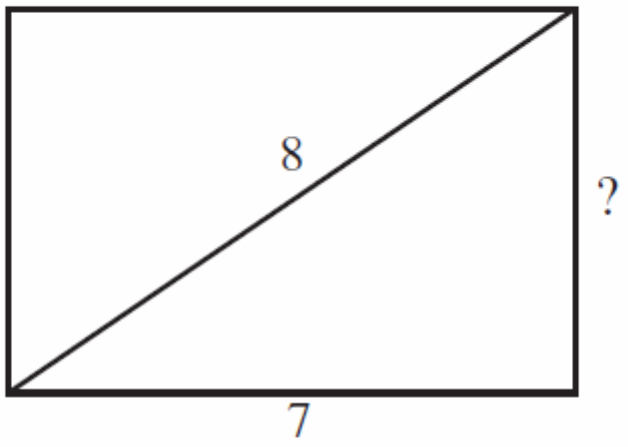
B 68

C 92

D 160

Question 9.

What is the height of this rectangle?



A 1 unit

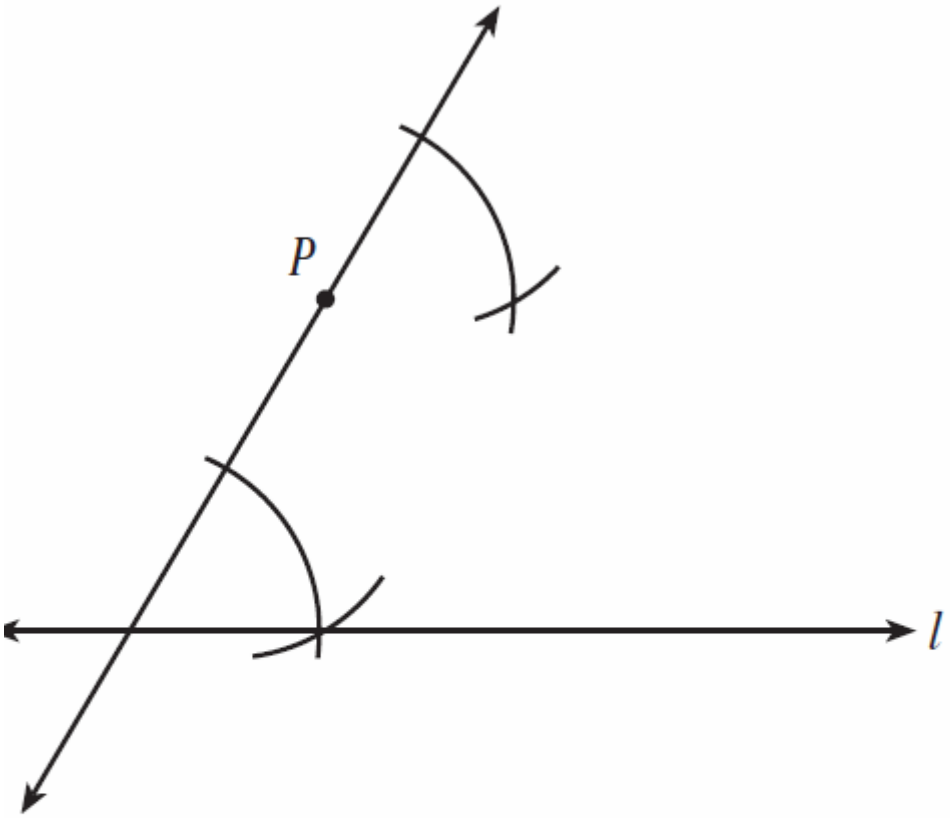
B 6 units

C $\sqrt{15}$ units

D $\sqrt{113}$ units

Question 10.

Marsha is using a straightedge and compass to do the construction shown below.



Which *best* describes the construction Marsha is doing?

A a line through P parallel to line l

B a line through P intersecting line l

C a line through P congruent to line l

D a line through P perpendicular to line l

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

PA00003145

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