Geometry Daily Quiz
01242020

Question 1.

Which numbers could represent the lengths of the sides of a triangle?

(1) 5, 9, 14
(2) 7, 7, 15
(3) 1, 2, 4
(4) 3, 6, 8

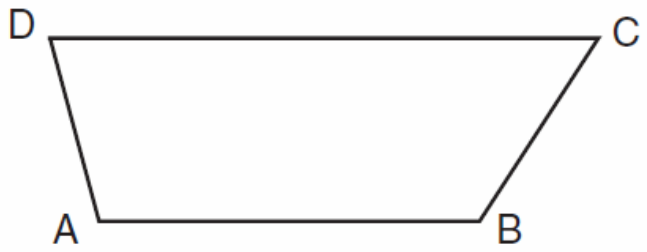
Question 2

The equation of a line is $3y + 2x = 12$. What is the slope of the line perpendicular to the given line?

(1) $\frac{2}{3}$
(2) $\frac{3}{2}$
(3) $-\frac{2}{3}$
(4) $-\frac{3}{2}$

Question 3.

In the diagram below, $\overline{AB}$ and $\overline{CD}$ are bases of trapezoid $ABCD$.



(Not drawn to scale)

If $m\angle B = 123$ and $m\angle D = 75$, what is $m\angle C$?

(1) 57

(2) 75

(3) 105

(4) 123

Question 4.

What is the equation of a line passing through the point $(4,-1)$ and parallel to the line whose equation is $2y - x = 8$?

(1) $y = \frac{1}{2}x - 3$

(2) $y = \frac{1}{2}x - 1$

(3) $y = -2x + 7$

(4) $y = -2x + 2$

Question 5.

The image of rhombus $VWXY$ preserves which properties under the transformation $T_{2,-3}$?

(1) parallelism, only
(2) orientation, only
(3) both parallelism and orientation
(4) neither parallelism nor orientation

Question 6.

The equation of a circle is $(x-3)^2+y^2=8$. The coordinates of its center and the length of its radius are

(1) $(-3,0)$ and 4
(2) $(3,0)$ and 4
(3) $(-3,0)$ and $2\sqrt{2}$
(4) $(3,0)$ and $2\sqrt{2}$

Question 7.

Which statement has the same truth value as the statement "If a quadrilateral is a square, then it is a rectangle"?

(1) If a quadrilateral is a rectangle, then it is a square.
(2) If a quadrilateral is a rectangle, then it is not a square.
(3) If a quadrilateral is not a square, then it is not a rectangle.
(4) If a quadrilateral is not a rectangle, then it is not a square.

Question 8.

The three medians of a triangle intersect at a point. Which measurements could represent the segments of one of the medians?

(1) 2 and 3

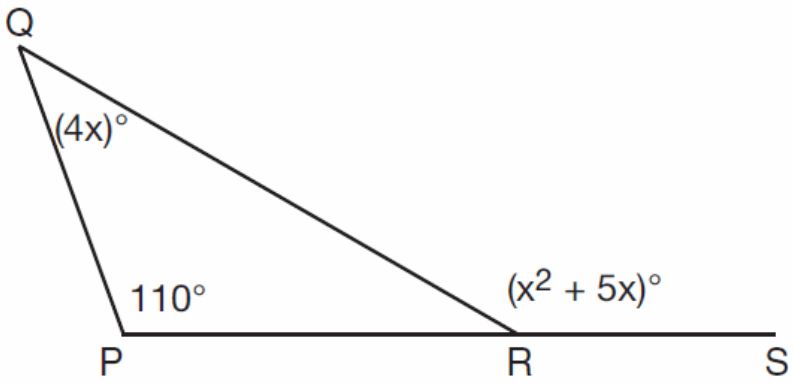
(2) 3 and 4.5

(3) 3 and 6

(4) 3 and 9

Question 9.

In the diagram of $\triangle PQR$ shown below, $\overline{PR}$ is extended to S, $m\angle P = 110$, $m\angle Q = 4x$, and $m\angle QRS = x^2 + 5x$.



What is $m\angle Q$?

(1) 44

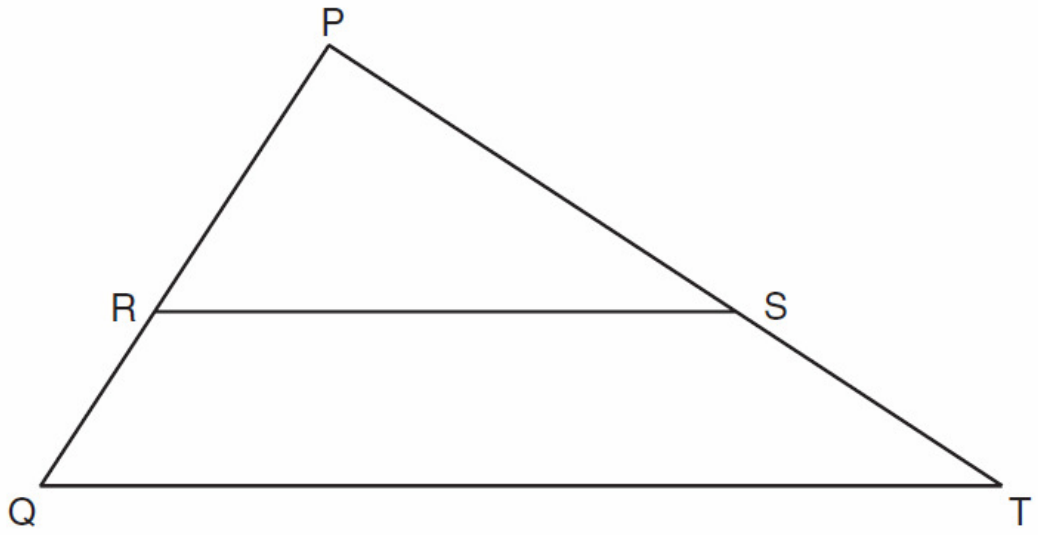
(2) 40

(3) 11

(4) 10

Question 10.

Triangle PQT with $\overline{RS} \parallel \overline{QT}$ is shown below.



If $PR = 12$, $RQ = 8$, and $PS = 21$, what is the length of $\overline{PT}$?

(1) 14

(2) 17

(3) 35

(4) 38

Bonus

The figure shows lines r, n, and p intersecting to form angles numbered 1, 2, 3, 4, 5, and 6. All three lines lie in the same plane.

Based on the figure, which of the individual statements would provide enough information to conclude that line r is perpendicular to line p?

A. $m\angle 2 = 90°$

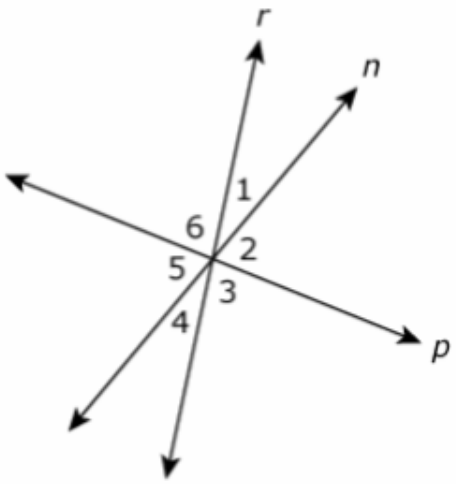
B. $m\angle 6 = 90°$

C. $m\angle 3 = m\angle 6$

D. $m\angle 1 + m\angle 6 = 90°$

E. $m\angle 3 + m\angle 4 = 90°$

F. $m\angle 4 + m\angle 5 = 90°$



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