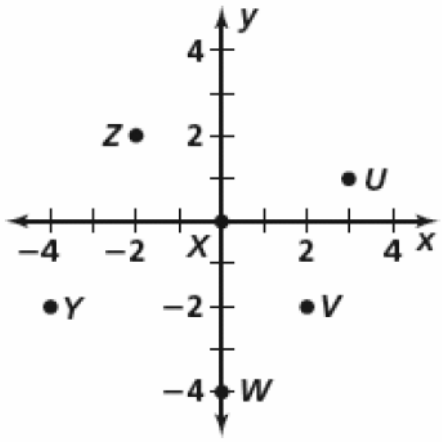
Geometry
Daily Quiz 10212019

Question 1.

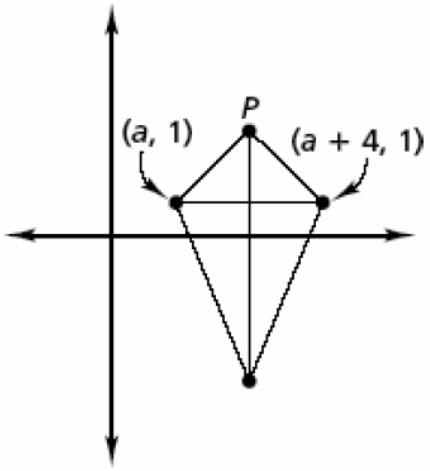
What is the y-coordinate of the midpoint of $\overline{WU}$?



a. -2.5 b. -1.5 c. -0.5 d. 1.5

Question 2.

The figure shown is a kite. What is the x-coordinate of point P?

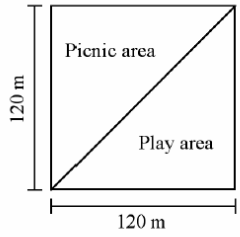


a. $\frac{a}{2}+4$ c. $a+2$

b. $\frac{a+4}{2}$ d. $2a+4$

Question 3.

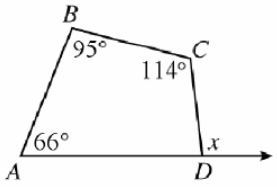
A community is building a square park with sides that measure 120 meters. To separate the picnic area from the play area, the park is split by a diagonal line from opposite corners. Determine the approximate length of the diagonal line that splits the square. If necessary, round your answer to the nearest meter.



a. 28,800 meters
b. 170 meters
c. 240 meters
d. 120 meters

Question 4.

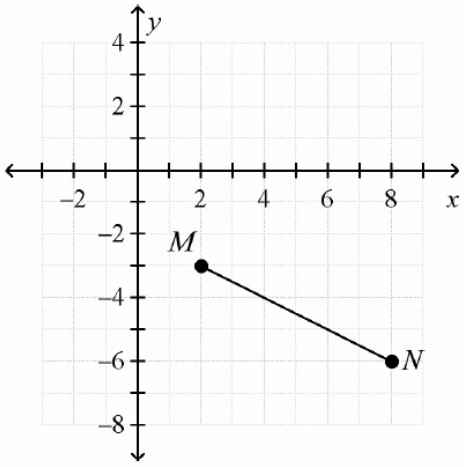
Three angles of quadrilateral *ABCD* have measures 66°, 95°, and 114°. What is the value of x?



a. 85° b. 95° c. 161° d. 275°

Question 5.

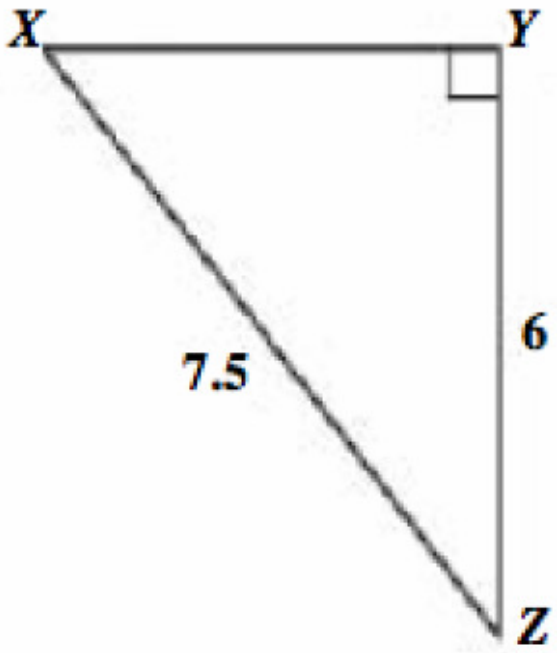
To the nearest tenth, what is the length, in units, of $\overline{MN}$?



a. 6.0 b. 6.7 c. 9.0 d. 9.1

Question 6.

In ΔXYZ, what is the cosine ratio of $\angle X$?



a. $\frac{9}{15}$

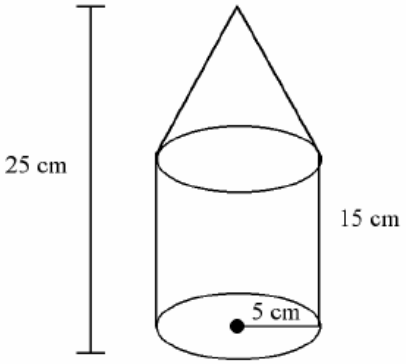
b. $\frac{9}{12}$

c. $\frac{12}{15}$

d. $\frac{15}{12}$

Question 7.

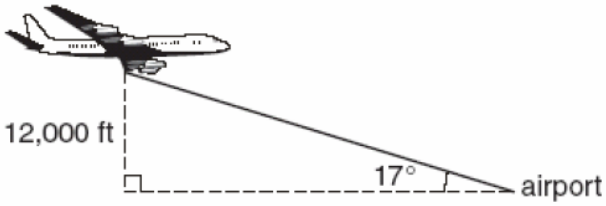
Find the volume of the figure below. Round to the nearest square centimeter.



a. 576 cm^3 b. 785 cm^3 c. 1440 cm^3 d. 1963 cm^3

Question 8.

A plane is flying at an altitude of 12,000 feet and is preparing to land at a nearby airport. The angle from the airport to the plane is 17°.



Note: Figure not drawn to scale.

To the nearest tenth of a foot, how far is the airport from the plane?

a. 3,668.8 feet
b. 12,548.3 feet
c. 39,250.2 feet
d. 41,043.6 feet

Question 9.

Quadrilateral $RSTU$ has vertices $R(-6, -3)$, $S(3, 3)$, and $T(4, -1)$. What are the coordinates of vertex U if $RSTU$ is a parallelogram?

a. $(-5, -6)$

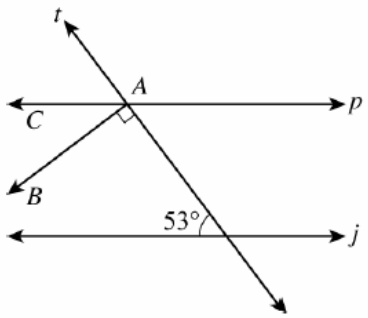
b. $(-5, -7)$

c. $(-6, -7)$

d. $(-6, -8)$

Question 10.

. In this drawing, line p is parallel to line j and line t is perpendicular to $\overrightarrow{AB}$.



What is the measure of $\angle BAC$?

a. 37°

b. 53°

c. 90°

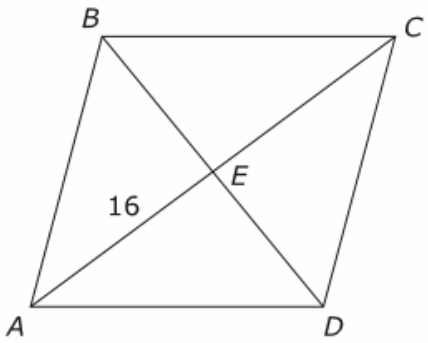
d. 127°

Bonus Question.

Mathematics

Use the information provided to answer Part A and Part B for question 29.

The figure shows parallelogram *ABCD* with $AE = 16$.



not drawn to scale

29. Part A

Let $BE = x^2 - 48$ and let $DE = 2x$. What are the lengths of $\overline{BE}$ and $\overline{DE}$? Justify your answer.

Enter your answer and your justification in the space provided.

Part B

What conclusion can be made regarding the specific classification of parallelogram *ABCD*? Justify your answer.

Enter your answer and your justification in the space provided.

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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