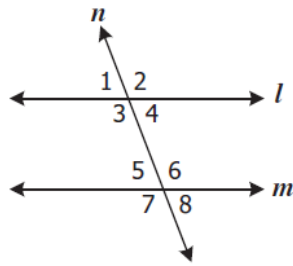


End of Course Practice #9

Name _____

Period _____

1) Lines l and m are cut by transversal n .

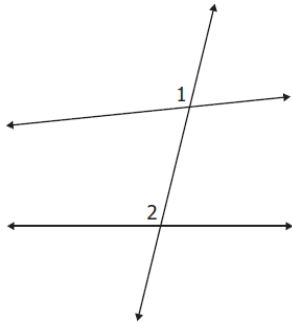


Which statement would prove $l \parallel m$?

- A $m\angle 2 = m\angle 6$
- B $m\angle 2 = m\angle 3$
- C $m\angle 7 + m\angle 8 = 180^\circ$
- D $m\angle 3 + m\angle 5 = 90^\circ$

2)

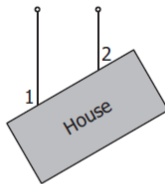
In this figure, two lines are cut by a transversal. Which type of angles are $\angle 1$ and $\angle 2$?



- A Vertical angles
- B Corresponding angles
- C Alternate interior angles
- D Same-side interior angles

3)

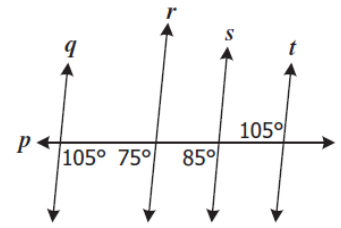
Sally is using strings to mark parallel rows for a vegetable garden behind her house.



If the measure of $\angle 1$ is 115° , what should be the measure of $\angle 2$?

- A 25°
- B 65°
- C 75°
- D 115°

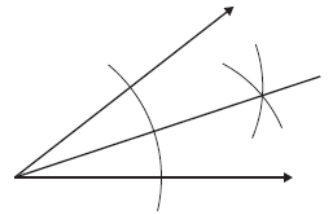
4) Line p is a transversal.



For lines q , r , s , and t , which is *not* parallel to the other three?

- A q
- B r
- C s
- D t

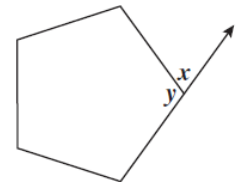
5)



Which of the following constructions is illustrated?

- A An angle congruent to a given angle
- B The bisector of a given angle
- C The bisector of a given segment
- D The perpendicular bisector of a given segment

6) This is a regular polygon.



What are the values of x and y ?

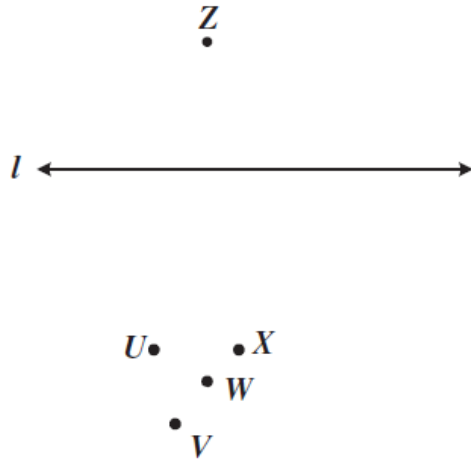
- A $78^\circ, 102^\circ$
- B $72^\circ, 108^\circ$
- C $60^\circ, 120^\circ$
- D $45^\circ, 135^\circ$

7) What is the *converse* of the following statement?

If Joe goes fishing, then he needs bait.

- A If he needs bait, then Joe goes fishing.
- B If Joe does not go fishing, then he does not need bait.
- C If he does not need bait, then Joe does not go fishing.
- D If Joe goes fishing, then he does not need bait.

8)



Which point is on the line \perp to l and passing through Z ?

- A U
- B V
- C W
- D X

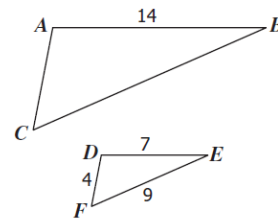
9) In which group of statements is the conclusion *not* justified by the previous pair of statements?

- A All cooks work in the kitchen.
Mary is a cook.
Mary works in the kitchen.
- B All dinosaurs are extinct.
A triceratops is a dinosaur.
All triceratops are extinct.
- C All squares are rectangles.
All rectangles are parallelograms.
All squares are parallelograms.
- D All fish live in the water.
Some snakes live in the water.
Some snakes are fish.

11) Which pipe lengths could be joined to form a triangle?

- A 15 ft, 6 ft, 5 ft
- B 13 ft, 12 ft, 5 ft
- C 40 ft, 20 ft, 10 ft
- D 19 ft, 16 ft, 2 ft

12)



In addition to the information given in the drawing, which statement would be sufficient to prove that $\triangle ABC \sim \triangle DEF$?

- A $\frac{BC}{AC} = \frac{1}{2}$
- B $\frac{BC}{AC} = \frac{9}{4}$
- C $AC = 18$ and $BC = 8$
- D $AC = 8$ and $BC = 18$

10) Let p represent

$$x^2 = 21,$$

and let q represent

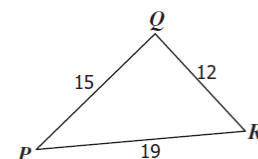
x is not a whole number.

Which is a representation of the statement below?

If x is a whole number, then $x^2 \neq 21$.

- A $\sim p \rightarrow \sim q$
- B $\sim p \rightarrow q$
- C $p \rightarrow \sim q$
- D $\sim q \rightarrow \sim p$

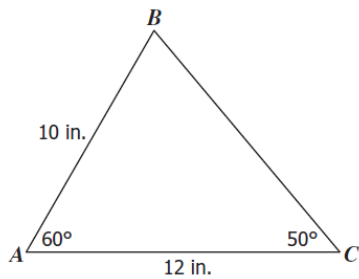
13)



Which lists the angles of the triangle in order from least to greatest?

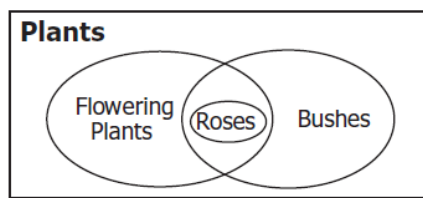
- A $\angle R, \angle Q, \angle P$
- B $\angle Q, \angle P, \angle R$
- C $\angle P, \angle R, \angle Q$
- D $\angle P, \angle Q, \angle R$

14) Jennifer made these measurements on $\triangle ABC$. BC must be —



- A less than 10 inches
- B between 10 and 12 inches
- C between 12 and 22 inches
- D greater than 22 inches

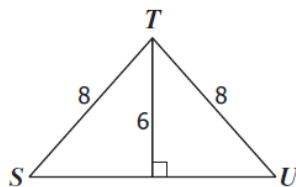
15)



According to the diagram, which is true?

- A No bushes are flowering plants.
- B No roses are bushes.
- C Some roses are not flowering plants.
- D Some flowering plants are bushes.

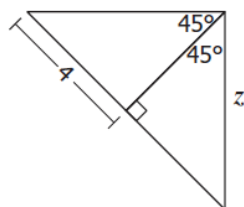
16)



What is the length of \overline{SU} ?

- A $2\sqrt{7}$ cm
- B 7 cm
- C $4\sqrt{7}$ cm
- D 20 cm

17)

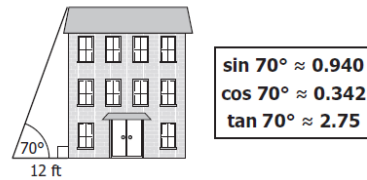


What is the value of z ?

- A $2\sqrt{2}$
- B $2\sqrt{3}$
- C $4\sqrt{2}$
- D $8\sqrt{2}$

18)

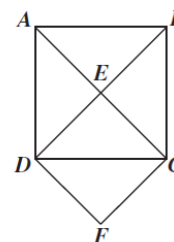
From a point 12 feet from the base of a building, the angle of elevation from the ground to the top of the building is 70° .



Which is *closest* to the height of the building?

- A 24 ft
- B 33 ft
- C 35 ft
- D 41 ft

19)

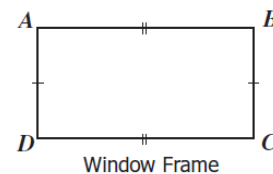


$ABCD$ and $DECF$ are both squares. If $AC = 28$ millimeters, what is the perimeter of $DECF$?

- A 14 mm
- B 28 mm
- C 42 mm
- D 56 mm

20)

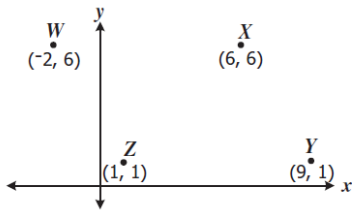
The opposite sides of a window frame are congruent.



Which additional piece of information would verify that the frame is a rectangle?

- A $\angle B \cong \angle D$
- B $\overline{AC} \cong \overline{BD}$
- C $\overline{AC} \perp \overline{BD}$
- D $m\angle A + m\angle D = 180^\circ$

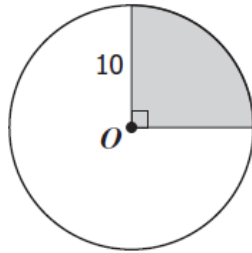
21)



In parallelogram $WXYZ$, what are the coordinates of the point of intersection of \overline{WY} and \overline{ZX} ?

- A (2.5, 2.5)
- B (7.5, 3.5)
- C (5.5, 3.5)
- D (3.5, 3.5)

22)

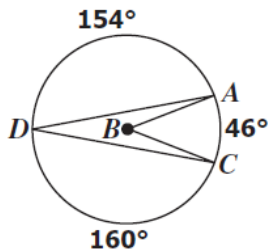


The area of the shaded sector of circle O is —

- A 5π
- B 20π
- C 25π
- D 50π

23)

Given: $\odot B$.

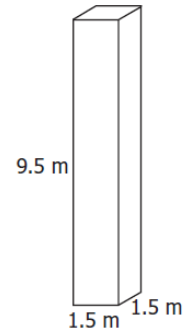


What is the $m\angle ADC$?

- A 23°
- B 46°
- C 77°
- D 80°

24)

A concrete pillar shaped as a rectangular prism is designed as follows.



Which is closest to the volume of concrete needed to fill the pillar?

- A 12.5 m^3
- B 14.3 m^3
- C 21.4 m^3
- D 28.5 m^3

25)

A right triangular pyramid has a height of 10 inches and a base area of 41.57 square inches. What is the volume, in cubic inches, of the pyramid?

- A 138.56
- B 207.85
- C 277.13
- D 415.69

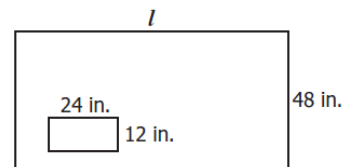
26)

The surface area of a plastic ball is 196π . A sponge ball has a radius twice that of the plastic ball. What is the surface area of the sponge ball?

- A $9,604\pi$
- B 993π
- C 784π
- D 546π

27)

A rectangular place mat is similar to the table upon which it is placed.

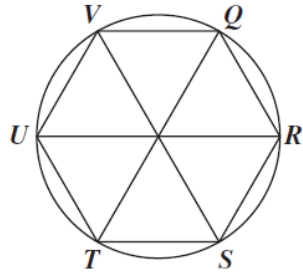


According to the diagram, which proportion can be used to determine the length of the table, l ?

- A $\frac{12}{48} = \frac{24}{l}$
- B $\frac{12}{24} = \frac{l}{48}$
- C $\frac{12}{l} = \frac{24}{48}$
- D $12l = 48$

28)

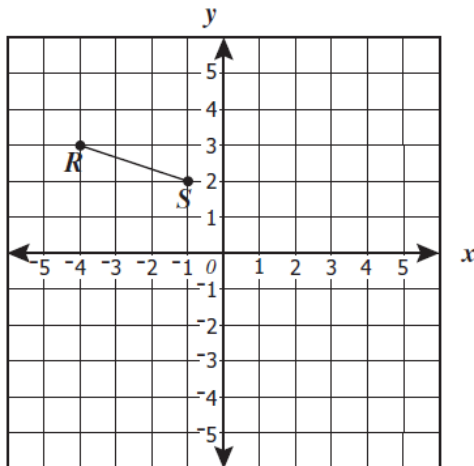
In the design, a hexagon is inscribed in a circle.



Which point shows the location of Point Q after a 240° clockwise rotation around the center?

- A S
- B T
- C U
- D V

29)



What are the *most likely* coordinates of R' if $\overline{R'S'}$ is a reflection of \overline{RS} across the y -axis?

- A $(4, 3)$
- B $(-4, -3)$
- C $(4, -3)$
- D $(3, 4)$

30) A line segment has an endpoint at $(3, 2)$. If the midpoint of the line segment is $(6, -2)$, what are the coordinates of the point at the other end of the line segment?

- A $(4.5, 0)$
- B $(0, 6)$
- C $(9, 4)$
- D $(9, -6)$