Geometry SOL Review

(With video links):

To open a link, Right click on the URL and choose Open Hyperlink

or

Type or Paste the address directly into your browser.

Questions? Email Mr. Gordon at:

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Formulas SOL Review

http://youtu.be/u9H7FCdQ7CQ

Write the formula:

Distance:

Midpoint:

Slope:

1.

The distance between the points (-2, -4) and (3, 8) is —

A $\sqrt{17}$
B 13
C 17
D 169

2.

What is the midpoint of the segment joining (12, 2) and (-5, -7)?

A (9, 17)
B (5, -3)
C (8.5, 4.5)
D (3.5, -2.5)

3.

The slope of the line joining the coordinate points (3, -1) and (-4, 7) is —

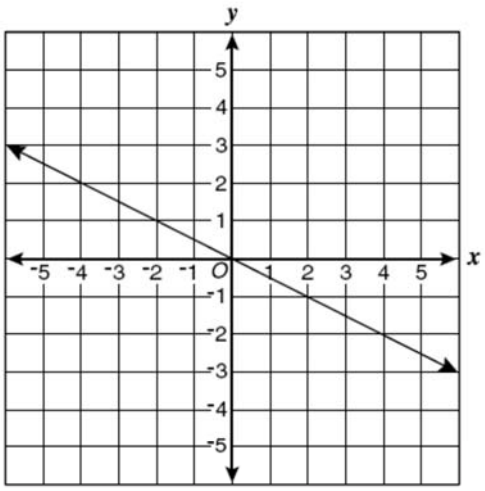
A $\frac{-8}{7}$

B $\frac{-7}{8}$

C $\frac{-6}{7}$

D $\frac{-1}{8}$

4.



What is most likely the slope of the line graphed above?

F -1

G $-\frac{1}{2}$

H $\frac{1}{2}$

J 1

5.

Line a passes through points with coordinates (-4, 5) and (2, -2). What is the slope of a line perpendicular to line a?

Reasoning and Logic SOL Review

http://youtu.be/7AGpQ-zyf1Y

Define or Describe:

Conditional statement:_____

_____

Converse:_____

_____

Inverse:_____

_____

Contrapositive:_____

_____

Biconditional statement:_____

_____

1.

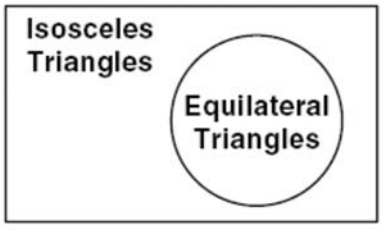
Consider the following statement.

If 4x = 8, then x = 2

Which is the inverse of the statement?

A If $x = 2$, then $4x = 8$.
B If $x \neq 2$, then $4x \neq 8$.
C If $x = 2$, then $4x \neq 8$.
D If $4x \neq 8$, then $x \neq 2$.

2.



According to the Venn diagram, which statement is true?

F All isosceles triangles are also equilateral triangles.
G All equilateral triangles are also isosceles triangles.
H Some equilateral triangles are also isosceles triangles.
J No isosceles triangles are equilateral triangles.

3.

If $p \rightarrow q$, and $q \rightarrow r$, then —

F $r \rightarrow p$
G $p \rightarrow r$
H $\sim r \rightarrow p$
J $r \rightarrow \sim p$

4.

Which is the contrapositive of the statement below?

If you do your homework, then you will be prepared for the test.

A If you are prepared for the test, then you did your homework.
B If you are not prepared for the test, then you did not do your homework.
C If you do your homework, then you will be prepared for the test.
D If you do not do your homework, then you will not be prepared for the test.

5.

What is the *converse* of the following statement?

If Joe goes fishing, then he needs bait.

F If he needs bait, then Joe goes fishing.
G If Joe does not go fishing, then he does not need bait.
H If he does not need bait, then Joe does not go fishing.
J If Joe goes fishing, then he does not need bait.

6.

Let p represent

$x^2 = 21$,

and let q represent

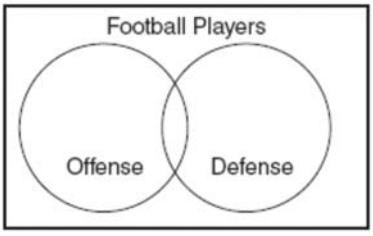
x is not a whole number.

Which is a representation of the statement below?

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

F $\sim p \rightarrow \sim q$
G $\sim p \rightarrow q$
H $p \rightarrow \sim q$
J $\sim q \rightarrow \sim p$

7.



According to the Venn diagram, which is true?

F All football players play offense or defense.
G No football players play offense and defense.
H All football players play defense.
J Some football players play offense and defense.

8.

Let *m* represent: *Angle A is obtuse.*

Let *n* represent: *Angle B is obtuse.*

Which is a symbolic representation of the following argument?

Angle A is obtuse if and only if Angle B is obtuse.
Angle A is obtuse or Angle B is obtuse.
Therefore, Angle A is obtuse and Angle B is obtuse.

A. $m \rightarrow n$
$m \wedge n$
$\therefore m \vee n$

B. $m \rightarrow n$
$m \vee n$
$\therefore m \wedge n$

C. $m \leftrightarrow n$
$m \wedge n$
$\therefore m \vee n$

D. $m \leftrightarrow n$
$m \vee n$
$\therefore m \wedge n$

Parallel Lines SOL Review

http://youtu.be/Fm8t3RNzgy4

Draw and label the following:

Corresponding angle pair:

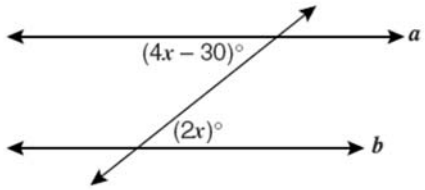
Alternate Interior angle pair:

Consecutive Interior angle pair:

(Same-Side)

Alternate Exterior angle pair:

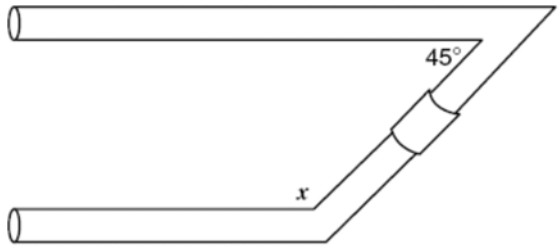
1.



Which value for x will make a parallel to b?

F 5
G 15
H 20
J 35

2.

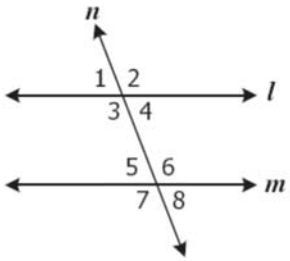


Two parallel sections of pipe are joined with a connecting pipe as shown. What is the value of x?

F 90°
G 115°
H 135°
J 160°

3.

Lines l and m are cut by transversal n.

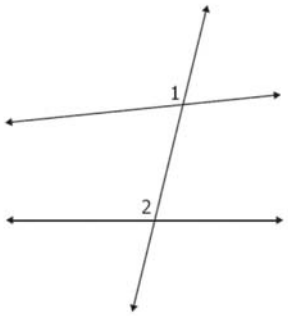


Which statement would prove $l \parallel m$?

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

4.

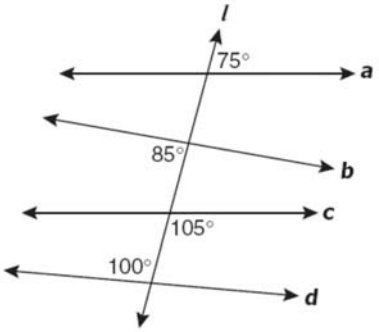
In this figure, two lines are cut by a transversal. Which type of angles are $\angle 1$ and $\angle 2$?



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

5.

Transversal l cuts lines a, b, c, and d.



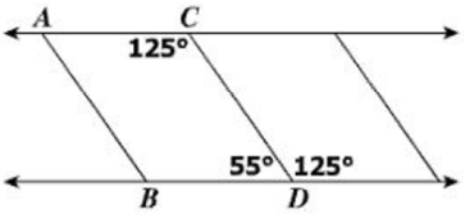
Which two lines are parallel?

A a and c
B a and d
C b and c
D b and d

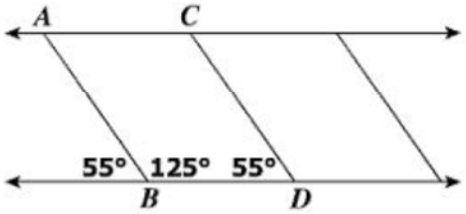
6.

The diagrams represent the stripes used to mark parking spaces on a lot. Based only on the information given, which diagram could be used to prove $\overline{AB} \parallel \overline{CD}$ and $\overline{AC} \parallel \overline{BD}$?

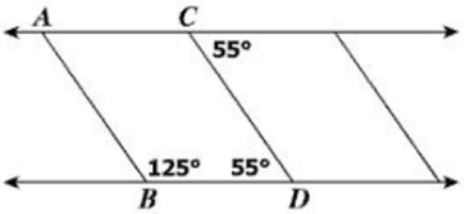
A



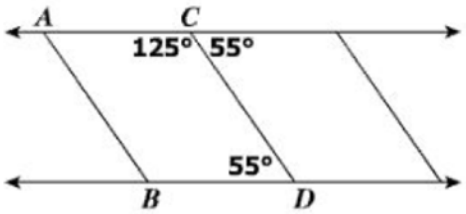
C



B



D



Triangle Inequalities SOL Review

http://youtu.be/RRKKOZLjBlM

If we are given 3 lengths, how do we determine if they form a triangle?

_____

How do we determine the ordering of sides or angles in a triangle?

_____

_____

1.

Which pipe lengths could be joined to form a triangle?

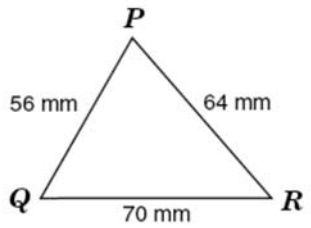
A 15 ft, 6 ft, 5 ft
B 13 ft, 12 ft, 5 ft
C 40 ft, 20 ft, 10 ft
D 19 ft, 16 ft, 2 ft

2.

Which of the following could *not* be the lengths of the sides of a triangle?

F 8 in., 19 in., 15 in.
G 6 in., 3 in., 9 in.
H 4 in., 5 in., 6 in.
J 10 in., 8 in., 9 in.

3.

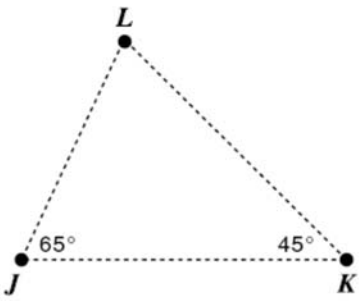


From smallest to largest, the angles of ΔPQR are —

F $\angle R, \angle Q, \angle P$
G $\angle R, \angle P, \angle Q$
H $\angle Q, \angle R, \angle P$
J $\angle P, \angle R, \angle Q$

4.

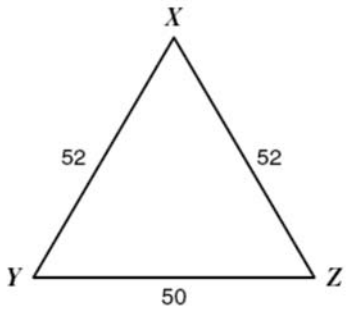
Three boys are in a field flying kites. Viewed from above, the angle at Kyle, *K*, measures 45°, and the angle at Jake, *J*, measures 65°.



Which shows the distances between the boys in order from least to greatest?

F *LJ, JK, KL*
G *KL, KJ, LJ*
H *KJ, LK, JL*
J *LJ, LK, JK*

5.



Using the information in the drawing, which angle has the least measure?

A $\angle XZY$
B $\angle XYZ$
C $\angle ZXY$
D $\angle YZX$

6.

If $m\angle A = 65°$, $m\angle B = 15°$, $m\angle C = 100°$, which lists the sides of the triangle in order from shortest to longest?

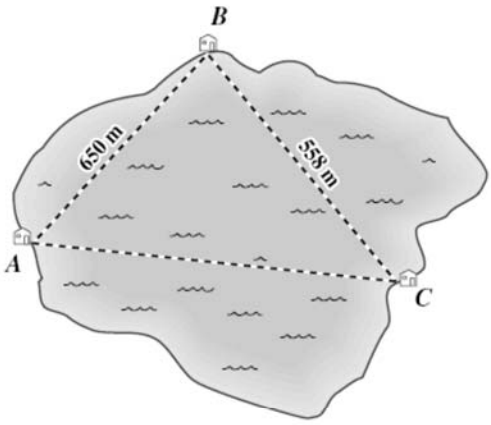
F $\overline{AC}$, $\overline{AB}$, $\overline{BC}$
G $\overline{BA}$, $\overline{BC}$, $\overline{AC}$
H $\overline{BA}$, $\overline{AC}$, $\overline{BC}$
J $\overline{AC}$, $\overline{BC}$, $\overline{BA}$

7.

In triangle ABC, $AC = 6$, $AB = 7$, and $BC = 5$. Which is true?

A The measure of $\angle C$ is the least of the three angles.
B The measure of $\angle C$ is the greatest of the three angles.
C The measure of $\angle B$ is the greatest of the three angles.
D The measure of $\angle B$ is the least of the three angles.

8.



The locations of three water pumping stations form a triangle on a map of the area. The distance from station A to station B is 650 meters. The distance from station B to station C is 558 meters. The distance from station A to station C is —

F less than 92 m
G exactly 92 m
H between 92 m and 1,208 m
J greater than 1,208 m

Triangle Congruency SOL Review

http://youtu.be/nFFm2CriJqE

What are 5 ways to prove that 2 triangles are congruent?

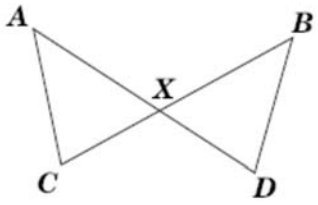
_____ _____

_____ _____

_____

1.

Given: $\overline{AD}$ and $\overline{BC}$ intersect at X
$AX = XB$
$CX = XD$

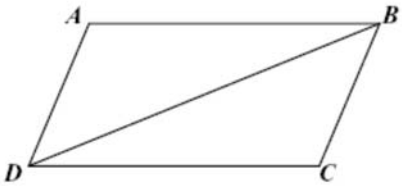


Which congruency statement is true?

A $\angle ACX \cong \angle BXD$
B $\angle ACX \cong \angle DXB$
C $\angle ACX \cong \angle BDX$
D $\angle ACX \cong \angle DBX$

2.

Given: $ABCD$ **is a parallelogram.**



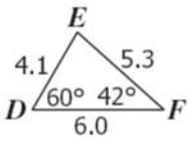
Prove: $\Delta ABD \cong \Delta CDB$

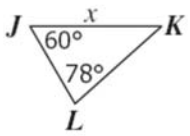
$\angle A \cong \angle C$	Opposite angles of a parallelogram are congruent.
$\overline{AD} \cong \overline{BC}$	Opposite sides of a parallelogram are congruent.
$\overline{AB} \cong \overline{CD}$	Opposite sides of a parallelogram are congruent.

Therefore, $\Delta ABD \cong \Delta CDB$ **by which postulate/theorem?**

A SSA
B ASA
C SAS
D AAS

3.



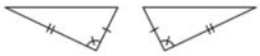


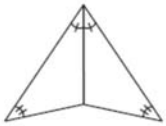
What value of x **makes** $\triangle DEF \cong \triangle JLK$ **?**

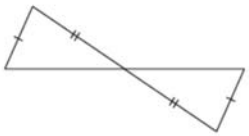
F $x = 9.4$
G $x = 6.0$
H $x = 5.3$
J $x = 4.1$

4.

With the information given in the drawings, which pair of triangles can be proven congruent by the Side-Angle-Side postulate?

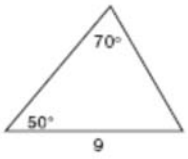
F 

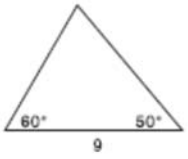
G 

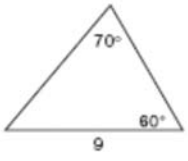
H 

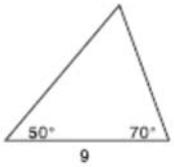
5.

Which triangle below is *not* congruent to the other three triangles?

A 

B 

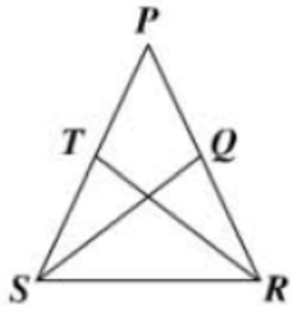
C 

D 

6.

Select the reasons for the last three statements of this proof.

Given: $\angle QSR \cong \angle TRS$; $\overline{PR} \cong \overline{PS}$



Prove: $\triangle QSR \cong \triangle TRS$

Statements	Reasons
1. $\overline{PR} \cong \overline{PS}$ $\angle QSR \cong \angle TRS$	1. Given
2. $\angle TSR \cong \angle QRS$	2.
3. $\overline{SR} \cong \overline{RS}$	3.
4. $\triangle QSR \cong \triangle TRS$	4.

<u>CHOICES:</u> Place the letter of the choice into the Reason column above

A. Base Angles of an Isosceles Triangle are Congruent

B. Corresponding Parts of Congruent Triangles are Congruent (CPCTC

C. Reflexive Property

D. Angle-Side-Angle (A.S.A.) Postulate

E. Side-Angle-Side (S.A.S.) Postulate

Triangle Similarity SOL Review

http://youtu.be/_MxlvW26Ba0

What is the definition of similarity?

_____

What are 3 ways to prove that 2 triangles are similar?

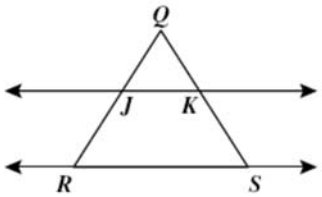
_____ _____ _____

Similarity means that

figures are ***proportional*** . How are proportions solved ?

_____

1.



$\overleftrightarrow{JK}$ and $\overleftrightarrow{RS}$ are parallel. Which of the following statements is true?

A $\frac{JR}{QJ} = \frac{KS}{RS}$

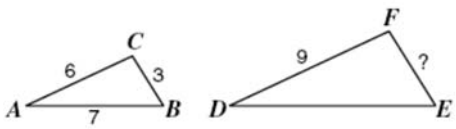
B $\frac{JK}{RS} = \frac{QK}{SK}$

C $\frac{QR}{KS} = \frac{QS}{RJ}$

D $\frac{QR}{QJ} = \frac{QS}{QK}$

2.

Triangles *ABC* and *DEF* are similar and have measurements as shown.



What is the measure of $\overline{EF}$?

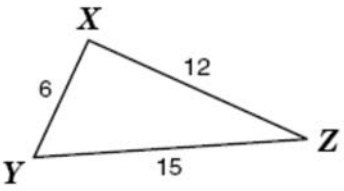
F $\frac{21}{2}$

G $\frac{15}{2}$

H $\frac{9}{2}$

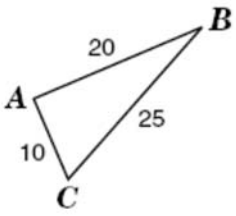
J $\frac{3}{2}$

3.

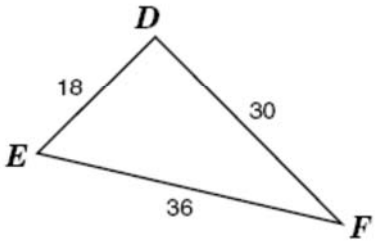


Which triangle is similar to ΔXYZ?

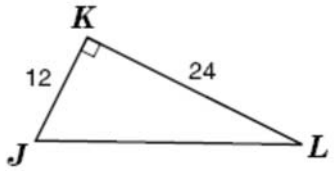
A



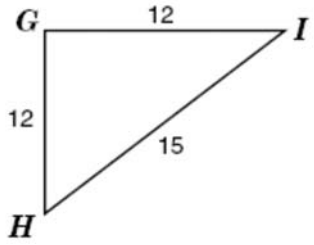
B



C



D



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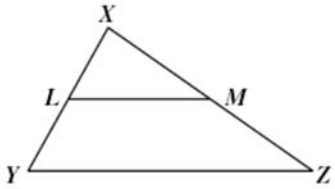


If triangle *XYZ* is similar to triangle *XLM*, then —

F $XM : XZ = XL : XY$

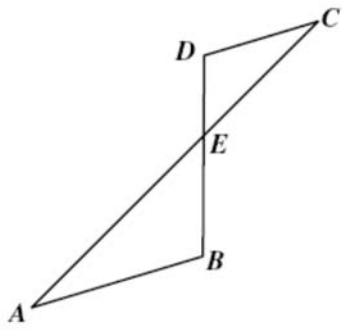
G $XM : XZ = XY : XL$

H $XL : LM = YZ : XZ$

J $XL : LY = XZ : MZ$

5.

Line segments AC and BD intersect at E, as shown in the figure. $\overline{AB} \parallel \overline{CD}$, $DE = 10$, $BE = 15$, and $CE = 20$.

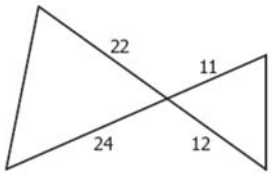


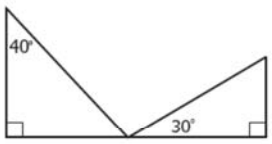
What is the measure of $\overline{AE}$?

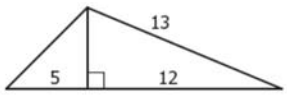
A 13
B 17
C 25
D 30

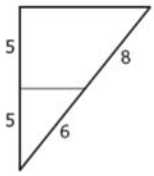
6.

Which drawing contains a pair of similar triangles?

F


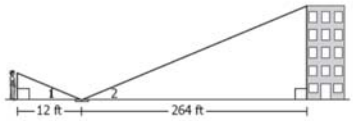
G


H


J


7.

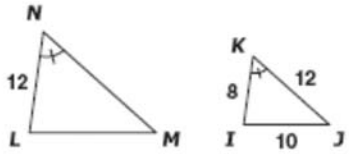
Joseph is standing 12 feet from a mirror lying on the ground, and his eyes are 5 feet above the ground.



The line-of-sight reflection on the mirror makes $\angle 1$ congruent to $\angle 2$. If the building is 264 feet from the mirror, which is closest to the height of the building?

F 100 ft
G 110 ft
H 130 ft
J 145 ft

8.



Which additional piece of information would prove that $\triangle IJK \sim \triangle LMN$?

F $NM = 18$
G $LM = 18$
H $NM = 15$
J $LM = 10$

Pythagorean Theorem SOL Review

http://youtu.be/gkT7HqT9p00

What are the parts of a right triangle?

_____

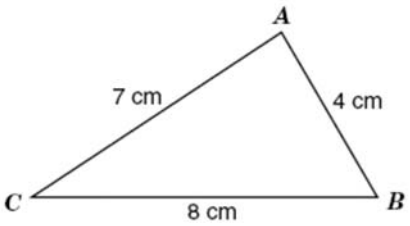
What is the Pythagorean Theorem?

_____

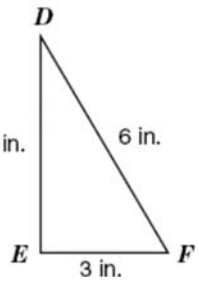
1.

Using the measures shown, which triangle must be a right triangle?

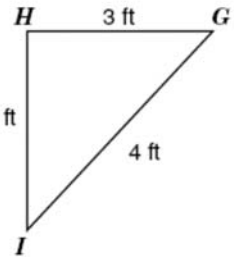
A



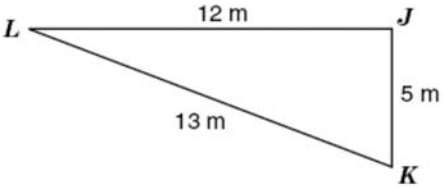
B



C

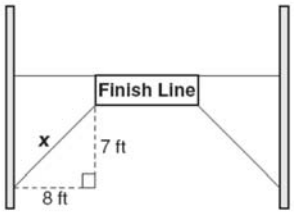


D



2.

To mark the end of a race, a finish-line banner is stretched across the road as shown in the drawing.

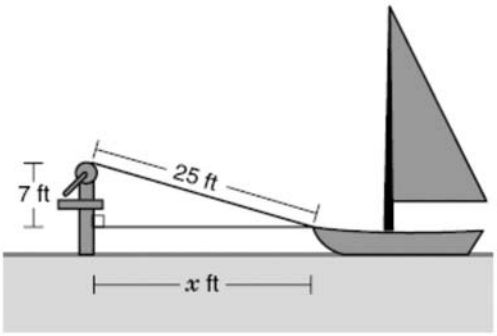


Which is closest to the length of the support rope designated by *x* in the drawing?

A 9.5 ft
B 10.6 ft
C 12.0 ft
D 15.0 ft

3.

A windlass is used to pull a boat to the dock. The rope is attached to the boat at a point 7 feet below the level of the windlass.



What is the distance from the boat to the dock when the rope is 25 feet?

A 25 ft
B 24 ft
C 18 ft
D 7 ft

4.

The top of a ladder is leaning on a building at a point 12 feet above the ground; the bottom of the ladder is 5 feet from the base of the building. What is the length of the ladder?

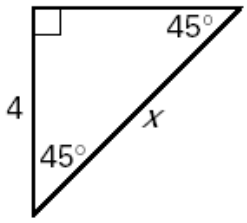
A 19 ft
B 17 ft
C 13 ft
D 7 ft

Special Right Triangles SOL Review

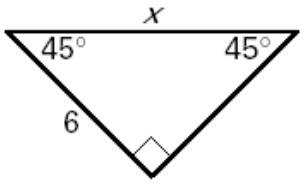
http://youtu.be/5qyd_a5MfyY

Find the value of the variables.

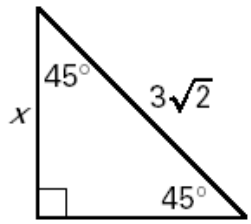
1.



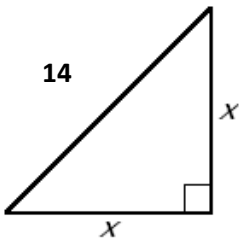
2.



3.

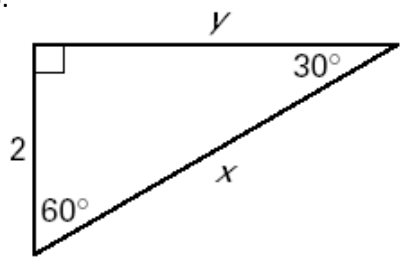


4.

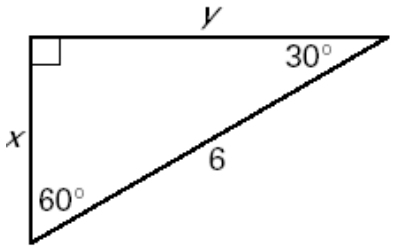


Find the value of the variables.

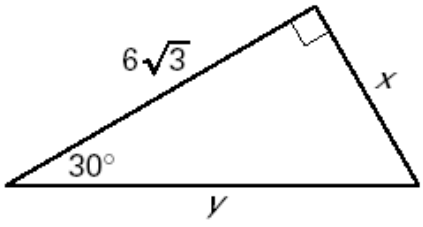
5.



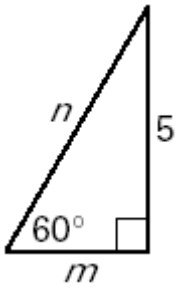
6.



7.



8.



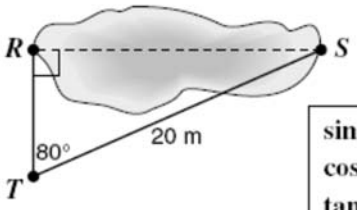
Sine/Cosine/Tangent SOL Review

http://youtu.be/7OIhfpzaBNY

S-O-H C-A-H T-O-A

1.

To determine the distance across a pond, Harry made the measurements shown in the diagram.

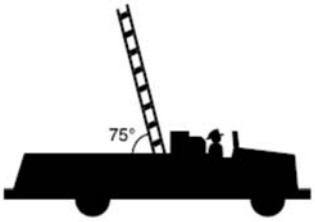


sin 80° ≈ 0.985
cos 80° ≈ 0.174
tan 80° ≈ 5.67

Which is *closest* to the distance from R to S?

F 3.48 m
G 19.7 m
H 20.3 m
J 113.4 m

2.



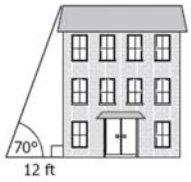
A fire truck has a ladder that can extend to 60 feet in length. The ladder can be safely raised to a maximum angle of 75° with the horizontal. Disregarding the height of the fire truck itself, which is closest to the maximum height that the ladder can safely reach?

sin 75° ≈ 0.966
cos 75° ≈ 0.259
tan 75° ≈ 3.73

A 15.53 ft
B 57.96 ft
C 60.00 ft
D 62.12 ft

3.

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°.



sin 70° ≈ 0.940
cos 70° ≈ 0.342
tan 70° ≈ 2.75

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

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

4. In right triangle ABC:

AB=10 BC=8 and AC=6

What is the measure of ∠ABC,

to the nearest degree?_____

Quadrilateral SOL Review

http://youtu.be/GpqXPUqlP8Q

Write the definition and characteristics of each quadrilateral:

Parallelogram:_____

_____

Rhombus:_____

_____

Rectangle:_____

_____

Square:_____

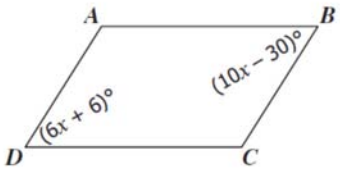
_____

1.

Which of the following quadrilaterals is *not* a parallelogram?

F Rectangle
G Rhombus
H Square
J Trapezoid

2.

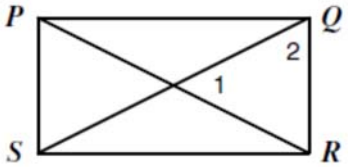


In parallelogram $ABCD$, the measure of $\angle C$ is —

A 82.5°
B 97.5°
C 120.0°
D 130.0°

3.

In the rectangle $PQRS$, m$\angle 1 = 50°$.

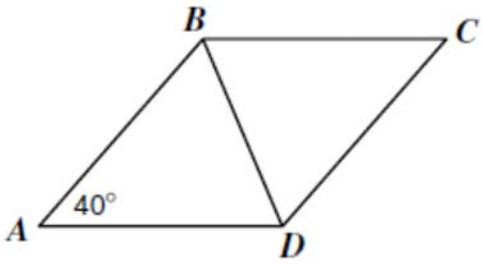


What is m$\angle 2$?

F 130°
G 85°
H 70°
J 65°

4.

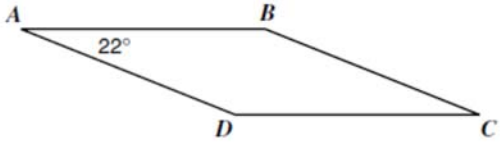
***ABCD* is a rhombus.**



What is the measure of $\angle CBD$?

A 50°
B 60°
C 70°
D 75°

5.



Quadrilateral *ABCD* is a parallelogram. The measure of $\angle C$ is —

F 22°
G 68°
H 112°
J 158°

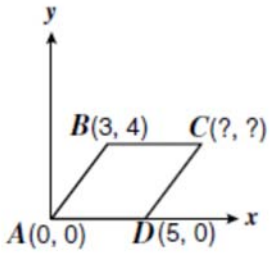
6.

Which of the following is *not* true about a parallelogram?

A Any two opposite sides are congruent.
B Any two opposite angles are congruent.
C The diagonals bisect each other.
D Any two consecutive angles are complementary.

7.

***ABCD* is a rhombus.**

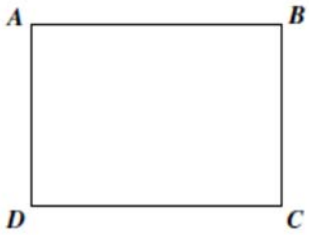


What are the coordinates of vertex *C*?

A (5, 4)
B (6, 4)
C (8, 4)
D (4, 3)

8.

The quadrilateral *ABCD* is a parallelogram.

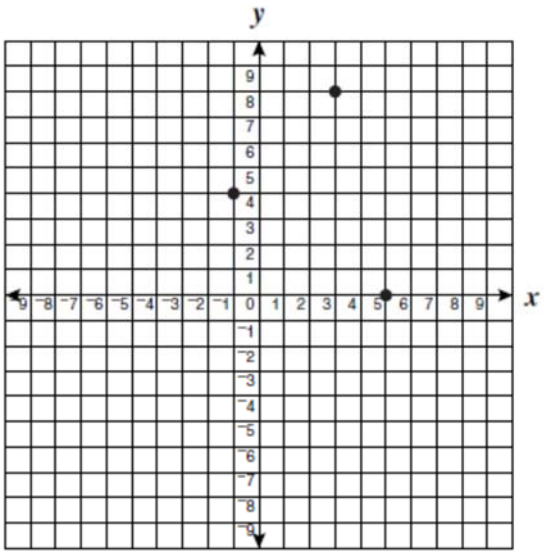


Which of the following pieces of information would suffice to prove that *ABCD* is a rectangle?

F $AC = BD$
G $AB = AD$
H $m\angle B = m\angle D$
J $\angle A$ and $\angle D$ are supplementary

9.

Three vertices of parallelogram *ABCD* have coordinates (−1, 4), (3, 8), and (5, 0).

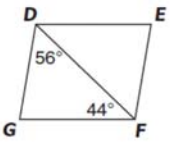


What are the coordinates of the other first-quadrant vertex?

A (−3, 12)
B (−1, 4)
C (1, 4)
D (9, 4)

10.

A diagonal of parallelogram *DEFG* forms angles with measures as shown.



What is the measure of $\angle DEF$?

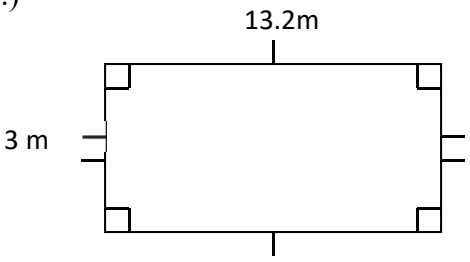
A 44°
B 56°
C 80°
D 100°

Surface Area and Volume SOL Review #1-5 Use $\pi \approx 3.14$

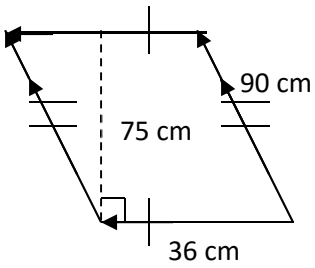
http://youtu.be/32WJeLycgLg

Find the area of each figure :

1.)

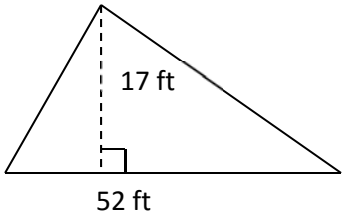


2.)

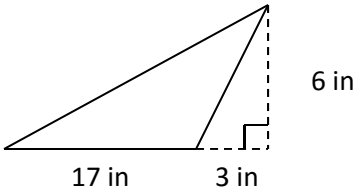


1) _____ 2) _____

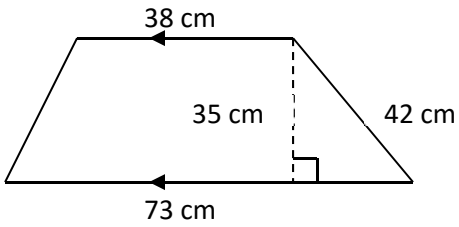
3.)



4.)



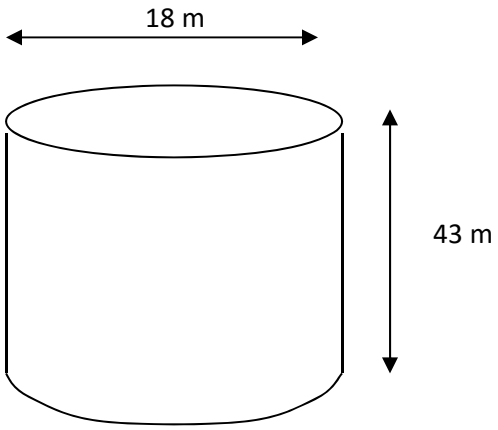
3) _____ 4) _____



5.) _____

Surface Area and Volume SOL Review #6-7
http://youtu.be/LU7rhlIW01M

6.)

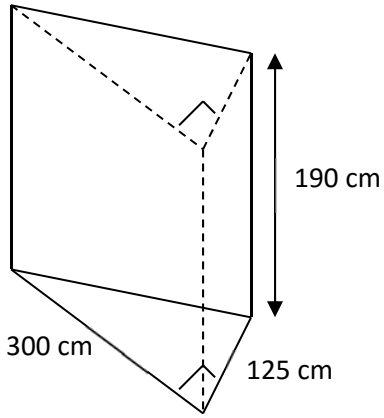


Find L.A. and S.A. of the right cylinder :
(**To the nearest tenth**)

L.A.= _____

S.A.= _____

7.)



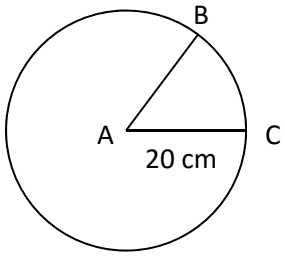
Find L.A. of the right triangle prism:

L.A. = _____

Surface Area and Volume SOL Review #9-10

http://youtu.be/TMlBFzrQvWw

9.) Find the area of sectorABC **in terms of π** !

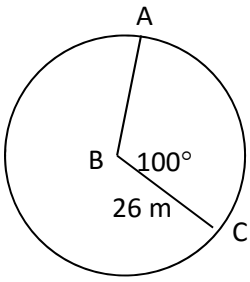


∠BAC = 40°

Circle A

Area of Sector : _____

10.) Find the length of arc AC **to the nearest tenth**!



Circle B

Length of arc = _____

Transformations SOL Review

http://youtu.be/TkiT8K1lNSI

1.

A trapezoid is located entirely in quadrant II. If this trapezoid is reflected across the x-axis, in which quadrant will the new trapezoid be located?

F I
G II
H III
J IV

2.

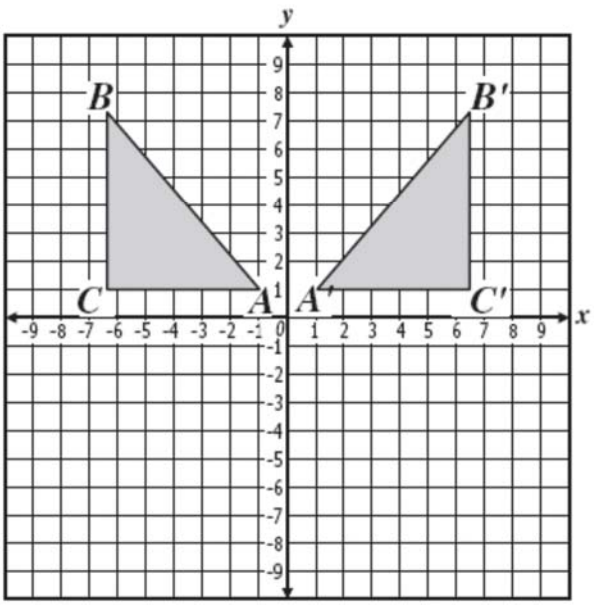
Which of the following letters has both line symmetry and point symmetry?

S D M H

F S
G D
H M
J H

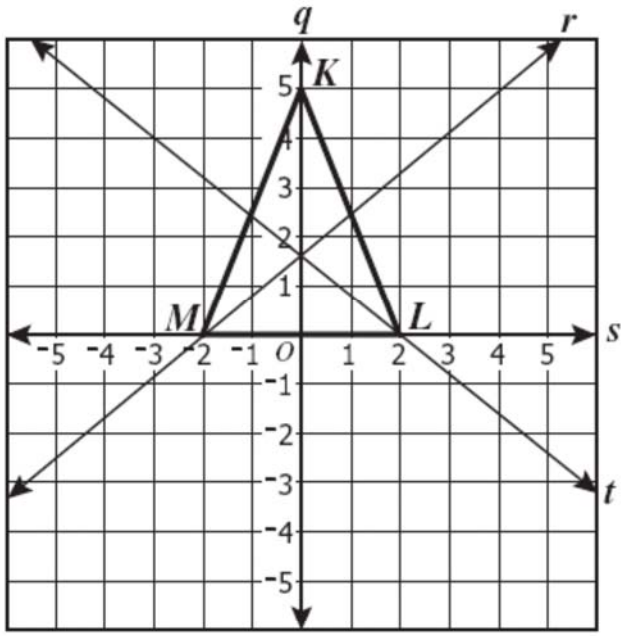
3.

Triangle ABC was transformed into triangle $A'B'C'$. Which accurately describes this transformation?



A Tessellation
B Reflection
C Rotation
D Translation

4.

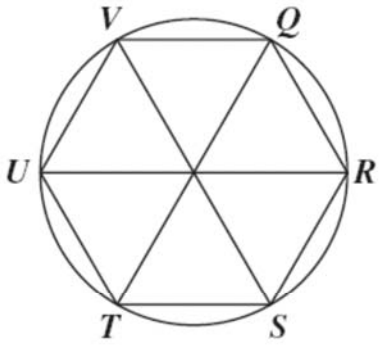


Which is most likely a line of symmetry for triangle KLM ?

A q
B r
C s
D t

5.

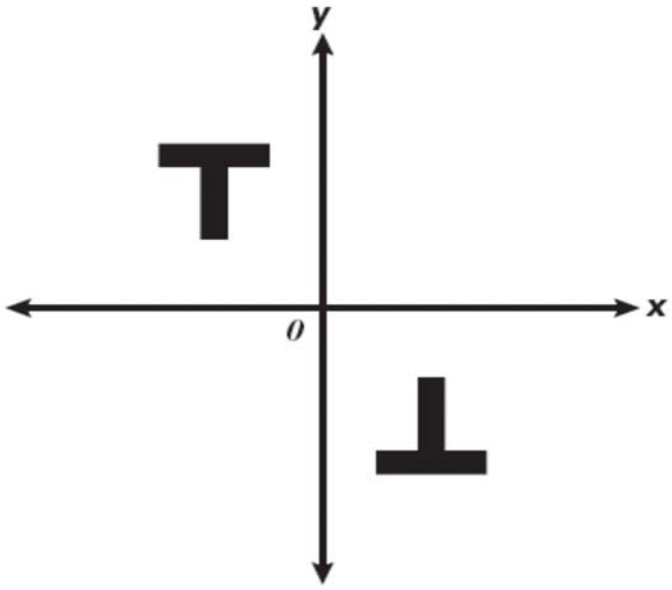
In the design, a hexagon is inscribed in a circle.



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

F S
G T
H U
J V

6



In relation to one figure, the other figure is apparently a —

F reflection across the line $y = 1$

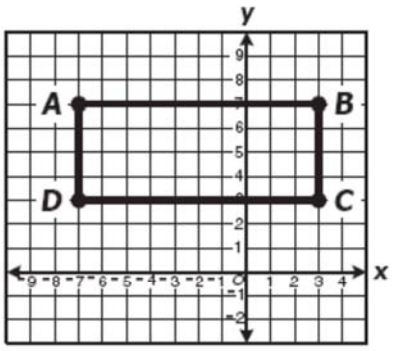
G reflection across the line $y = x$

H 90° rotation about the origin

J 180° rotation about the origin

7.

Rectangle *ABCD* is placed in a coordinate plane as shown.



Which equation describes a line of symmetry for rectangle *ABCD*?

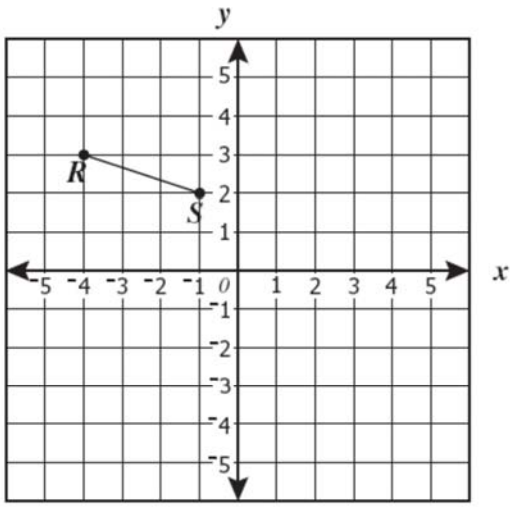
F $x = 2$

G $x = 5$

H $y = 5$

J $y = x$

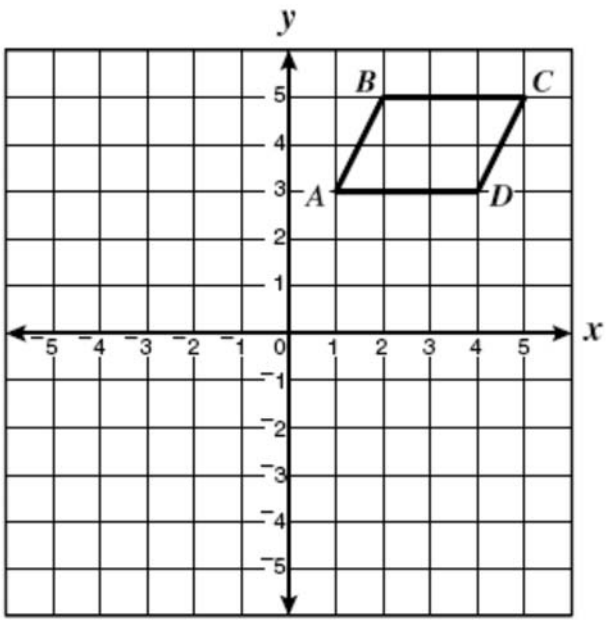
8.



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)

9.

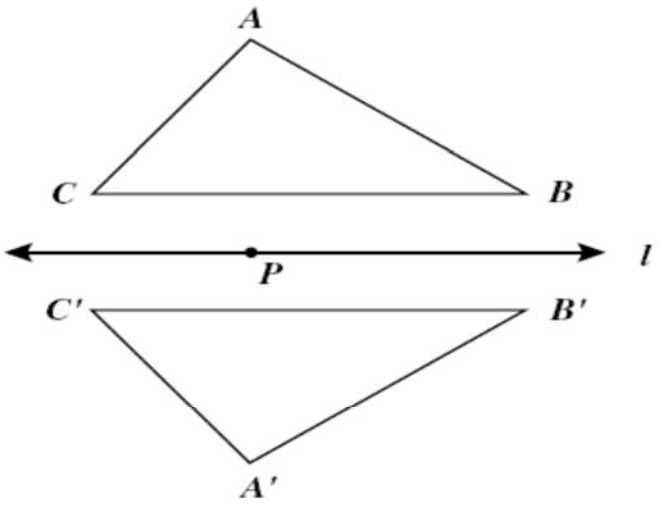


If parallelogram *ABCD* is translated so that the new location of point *D* is (−1, 2), what would be the new location of point *B*?

F (−5, 0)
G (−3, 4)
H (−2, 5)
J (1, 4)

10.

Triangle $A'B'C'$ is a transformation of triangle ABC.



If $A \rightarrow A'$, $B \rightarrow B'$, and $C \rightarrow C'$, $A'B'C'$ is a —

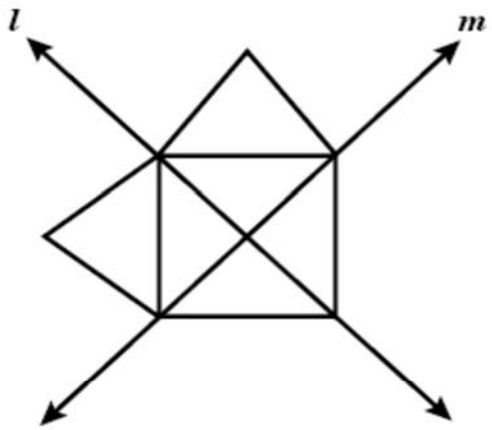
A reflection of triangle ABC across line l

B 180° rotation of triangle ABC about Point P

C translation of triangle ABC across the line l

D 90° rotation of triangle ABC across the line l

11.



The figure shown is apparently symmetric with respect to —

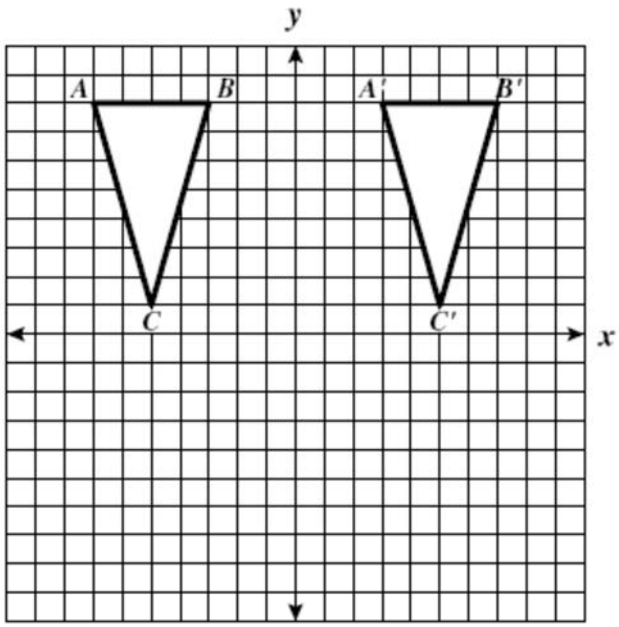
F line l only

G line m only

H both lines l and m

J neither line l nor line m

12.



Triangle $A'B'C'$ is —

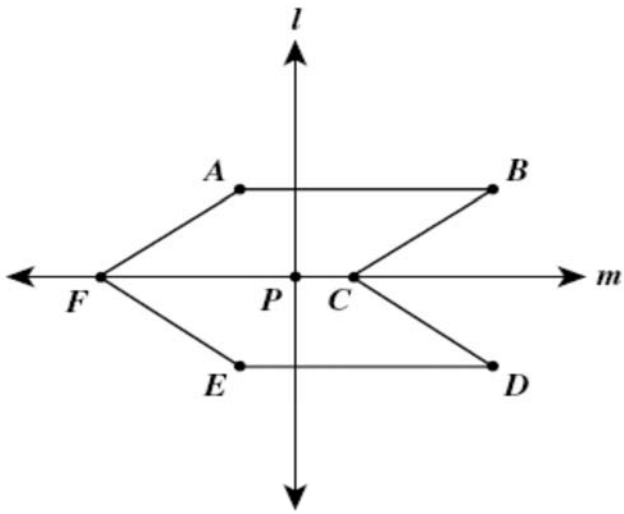
F a translation of triangle ABC across the y-axis

G a 90° clockwise rotation of triangle ABC about the origin

H a reflection of triangle ABC across the y-axis

J a reflection of triangle ABC across the x-axis

13.



Hexagon $ABCDEF$ is apparently symmetric with respect to —

A point P only

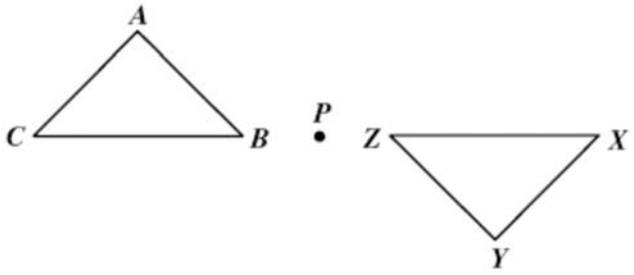
B line m only

C line l only

D both lines l and m only

14.

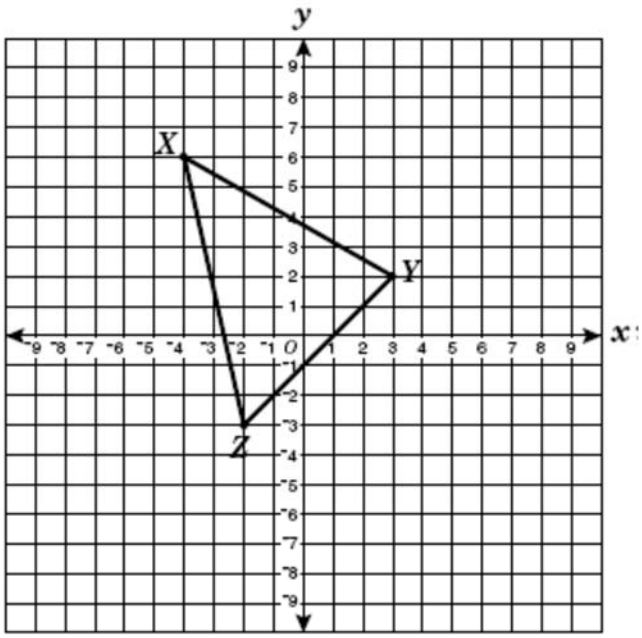
ΔXYZ was obtained from ΔABC by a rotation about the point P.



Which of the following indicates the correspondence of the vertices?

F $A \rightarrow X, B \rightarrow Y, C \rightarrow Z$
G $A \rightarrow Y, B \rightarrow Z, C \rightarrow X$
H $A \rightarrow X, B \rightarrow Z, C \rightarrow Y$
J $A \rightarrow Z, B \rightarrow X, C \rightarrow Y$

15.



If triangle XYZ is reflected across the y-axis to form triangle $X'Y'Z'$, what is the coordinate of Y'?

F $(-3, 2)$
G $(4, 6)$
H $(2, -3)$
J $(3, -2)$

Polygon SOL Review

http://youtu.be/ZWU8cvLBwcA

Find the sum of the measures of the interior angles of the indicated convex polygon.

1. Hexagon **1.**_____

2. 15-gon **2.**_____

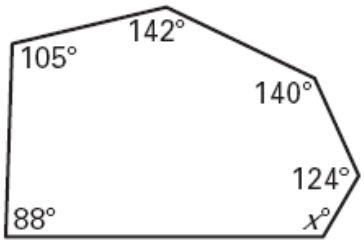
The sum of the measures of the interior angles of a convex polygon is given. Find the the number of sides.

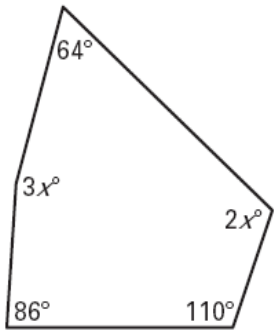
3. 900° **3.**_____

4. 2520° **4.**_____

Find the value of *x*.

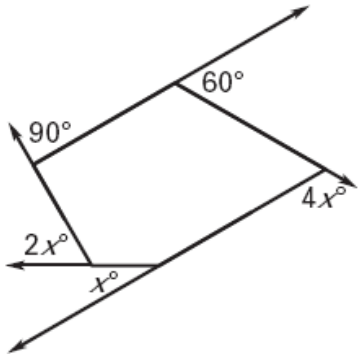
5.

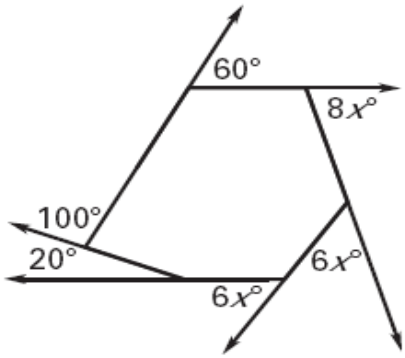




5._____ **6.**_____

Find the value of *x*.

7. 

8. 

7._____ **8.**_____

Find the measures of an interior angle and an exterior angle of the indicated polygon.

9. Regular hexagon **9.**_____ _____

In Exercise 10, find the value of *n* for each regular *n*-gon described.

10. Each exterior angle of the regular *n*-gon has a measure of 45°.

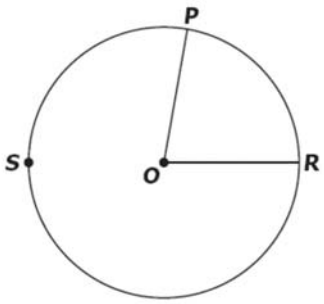
10._____

CIRCLES SOL Review

http://youtu.be/NKx21CTE5HY

1.

In circle O, the degree measure of $\overset{\frown}{PSR}$ is 280°.

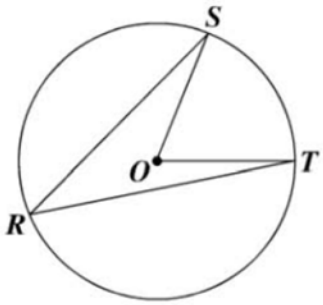


What is the degree measure of $\angle POR$?

F 160°
G 85°
H 80°
J 40°

2.

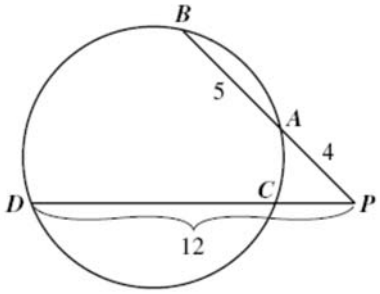
In circle O, $m\angle SOT = 68°$.



What is $m\angle SRT$?

3.

Secants $\overline{PB}$ and $\overline{PD}$ intersect the circle at A and C, respectively.

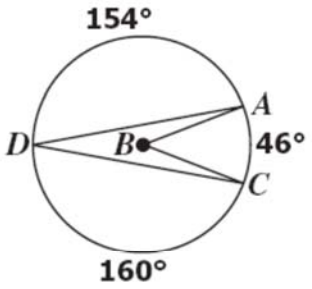


What is the length of $\overline{PC}$?

F 3
G 4
H 5
J 6

4.

Given: $\odot B$.

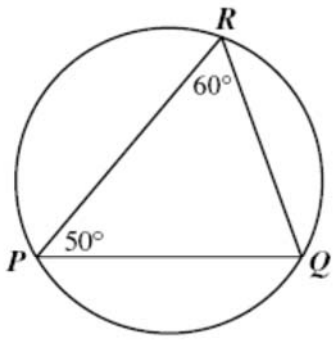


What is the $m\angle ADC$?

F 23°
G 46°
H 77°
J 80°

5.

The figure shows a circle. $m\angle RPQ = 50°$ and $m\angle PRQ = 60°$.

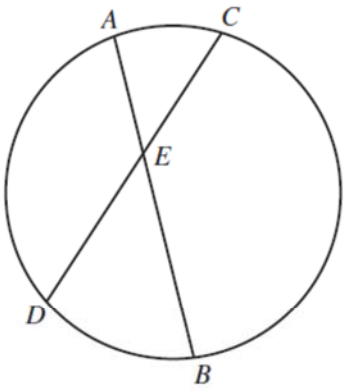


What is the measure of $\overset{\frown}{PR}$?

A 70°
B 100°
C 120°
D 140°

6.

In the circle below, $\overline{AB}$ and $\overline{CD}$ are chords intersecting at E.



If $AE = 5$, $BE = 12$, and $CE = 6$, what is the length of $\overline{DE}$?

A 7

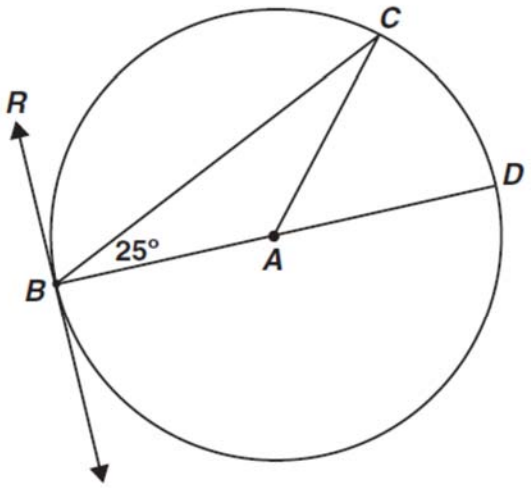
B 9

C 10

D 13

7.

$\overline{RB}$ is tangent to a circle, whose center is A, at point B. $\overline{BD}$ is a diameter.



What is $m\angle CBR$?

A 50°

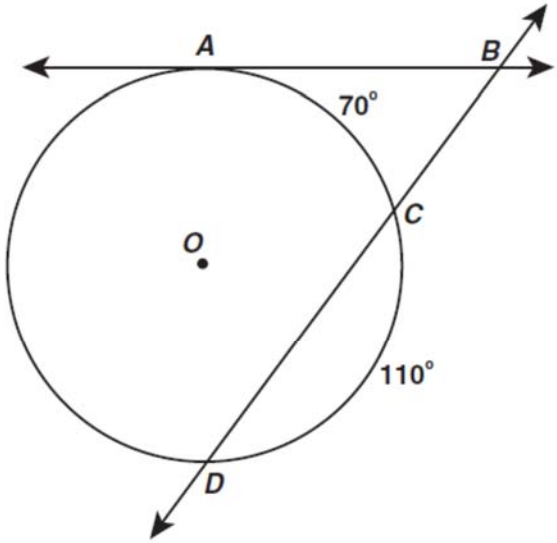
B 65°

C 90°

D 130°

8.

In the figure below, $\overline{AB}$ is tangent to circle O at point A, secant $\overline{BD}$ intersects circle O at points C and D, $m\overset{\frown}{AC} = 70°$, and $m\overset{\frown}{CD} = 110°$.



What is $m\angle ABC$?

A 20°

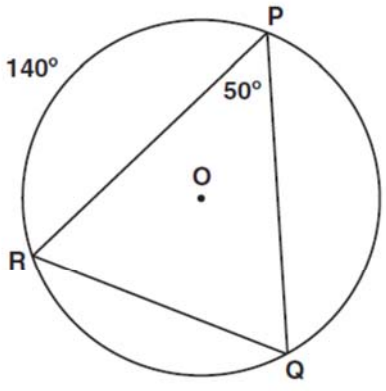
B 40°

C 55°

D 70°

9.

In the circle shown below, the measure of $\overset{\frown}{PR} = 140°$ and the measure of $\angle RPQ = 50°$.



What is the measure of $\overset{\frown}{PQ}$?

A 50°

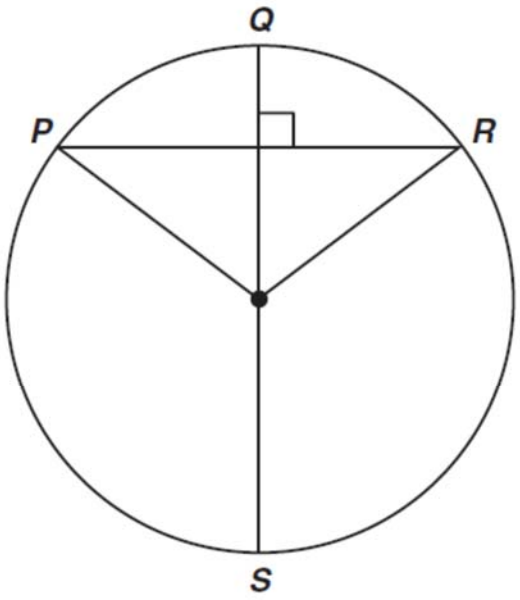
B 60°

C 70°

D 120°

10.

$\overline{QS}$ **is a diameter of the circle below, and** $\overline{QS} \perp \overline{PR}$.



If $m\overset{\frown}{PQR} = 106°$, **what is** $m\overset{\frown}{PS}$?

A 53°

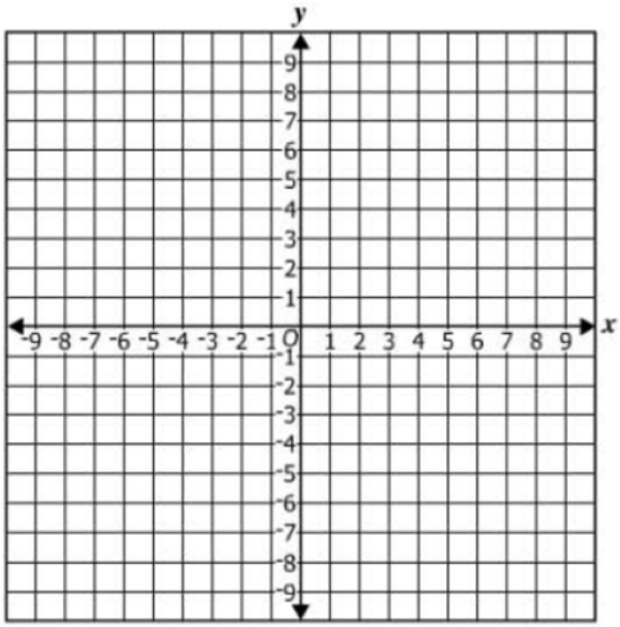
B 74°

C 106°

D 127°

11.

Circle O is defined by the equation $x^2 + (y-2)^2 = 25$. Plot the center of circle O and one point with integral coordinates that lies on circle O.



12.

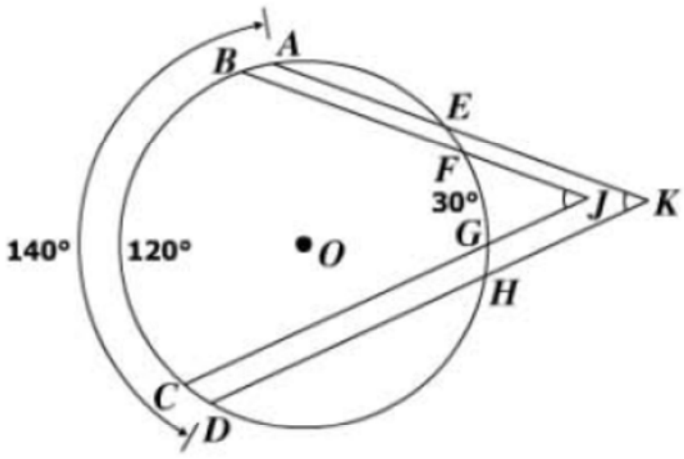
Given: Circle W
$W(-4, 6)$
Radius = 10 units

Which point lies on circle W?

- **A** (0, 4)
- **B** (2, 10)
- **C** (4, 0)
- **D** (6, 16)

13.

In circle O, $m\overset{\frown}{FG} = 30°$, $m\overset{\frown}{BC} = 120°$, and $\angle J \cong \angle K$.



What is $m\overset{\frown}{EH}$?

- A 35°
- B 40°
- C 45°
- D 50°

14.
(Drag and Drop)

Given: Circle O with diameter $\overline{CD}$
$C(-7, -4)$ and $D(1, 2)$

Create the equation of this circle.

The Equation of the Circle

[ ] + [ ] = [ ]

$(x-3)^2$	$(x+3)^2$
$(y-1)^2$	$(y+1)^2$
25	100