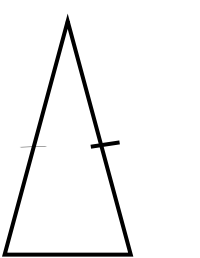
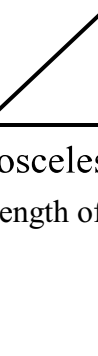
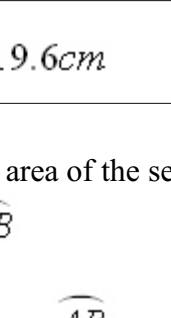
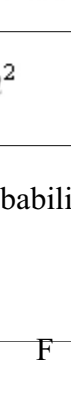



Identify each triangle completely. (By sides and angles.)

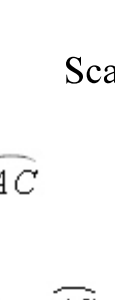
1) 
Isosceles, Acute

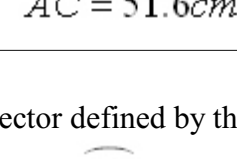
2) 
Scalene, Right

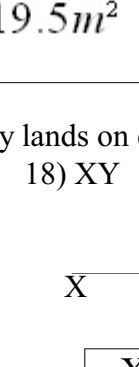
3) 
Equilateral, Equiangular

4) 
Scalene, Obtuse

5) 
Isosceles, Right

6) 
Scalene, Acute

7) 
Isosceles, Obtuse

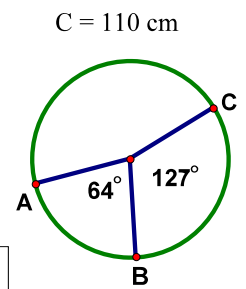
8) 
Isosceles, Right

Find the length of each arc.

9) \widehat{AB} 10) \widehat{AC} 11) \widehat{ABC} 12) \widehat{BAC}

$$\frac{64^\circ}{360^\circ} = \frac{\widehat{AB}}{110\text{cm}} \quad \frac{169^\circ}{360^\circ} = \frac{\widehat{AC}}{110\text{cm}} \quad \frac{191^\circ}{360^\circ} = \frac{\widehat{ABC}}{110\text{cm}} \quad \frac{233^\circ}{360^\circ} = \frac{\widehat{BAC}}{110\text{cm}}$$

$\widehat{AB} = 19.6\text{cm}$	$\widehat{AC} = 51.6\text{cm}$	$\widehat{ABC} = 58.4\text{cm}$	$\widehat{BAC} = 71.2\text{cm}$
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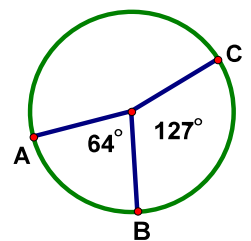
Find the area of the sector defined by the given arc.

13) \widehat{AB} 14) \widehat{AC} 15) \widehat{ABC} 16) \widehat{BAC}

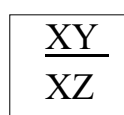
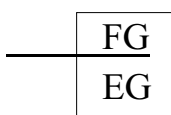
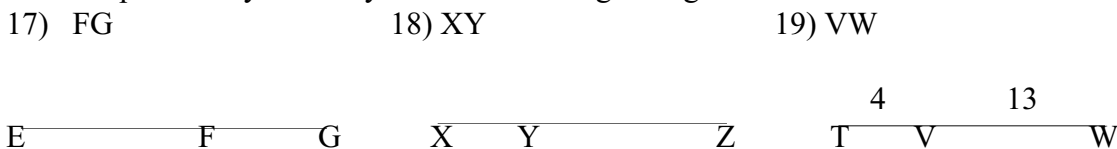
$$\frac{64^\circ}{360^\circ} = \frac{\widehat{AB}}{254.5\text{m}^2} \quad \frac{169^\circ}{360^\circ} = \frac{\widehat{AC}}{254.5\text{m}^2} \quad \frac{191^\circ}{360^\circ} = \frac{\widehat{ABC}}{254.5\text{m}^2} \quad \frac{233^\circ}{360^\circ} = \frac{\widehat{BAC}}{254.5\text{m}^2}$$

$= 45.2\text{m}^2$	$= 119.5\text{m}^2$	$= 135\text{m}^2$	$= 164.7\text{m}^2$
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r = 9 m

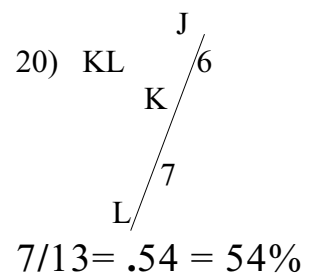


Find the probability that a fly lands on each segment given below.



$$\frac{13}{17} = .76$$

$$= 76\%$$



21) A mascot runs diagonally across a basketball court from one corner to the opposite corner. The court is 84 feet long and 50 feet wide. What is the distance the mascot travels between the corners?

$$50^2 + 84^2 = c^2$$

$$2500 + 7056 = c^2$$

$$9556 = c^2$$

$$97.8 = c$$

The mascot travels 97.8 ft

22) A 15 foot ladder leans against the wall of a building. The foot of the ladder is positioned 9 feet from the wall. How far up the wall does the ladder touch the building?

$$9^2 + b^2 = 15^2$$

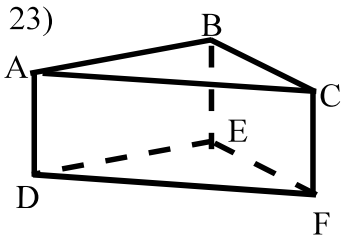
$$81 + b^2 = 225$$

$$b^2 = 144$$

$$b = 12$$

The ladder is 12 ft is up the wall.

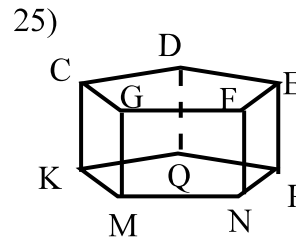
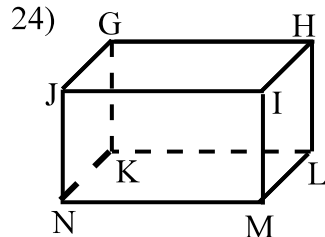
Classify each polyhedron and list the vertices, edges, and faces.



Faces: $\triangle ABC$, $\triangle DEF$, $ADFC$, $BECF$, $ABED$

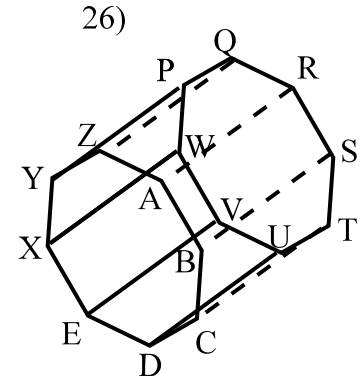
Vertices: A, B, C, D, E, F

Edges: AB, BC, CF, AD, AC, DF, DE, EF, BE



Pentagonal Prism

Bases:
Pentagon CDEFG
Pentagon KMN PQ

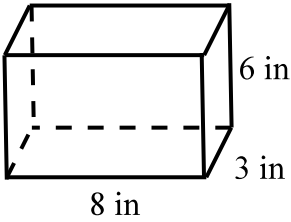


Octagonal Prism

Bases:
Octagon ABCDEXYZ
Octagon PQRSTUW

Give the base area and height of each prism below, then find its' surface area and volume.

27)

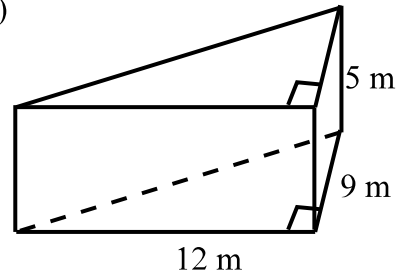


Base Area = $8\text{ in} \times 3\text{ in} = 24\text{ in}^2$
 Height = 6 in
 Volume = $\text{BA} \times \text{H} = 24\text{ in}^2 \times 6\text{ in} = 144\text{ in}^3$

Surface Area:

Base: $8\text{ in} \times 3\text{ in} = 24\text{ in}^2$
 Top: $8\text{ in} \times 3\text{ in} = 24\text{ in}^2$
 Left: $6\text{ in} \times 3\text{ in} = 18\text{ in}^2$
 Right: $6\text{ in} \times 3\text{ in} = 18\text{ in}^2$
 Front: $6\text{ in} \times 8\text{ in} = 48\text{ in}^2$
 Back: $6\text{ in} \times 8\text{ in} = 48\text{ in}^2$
 S.A. = 180 in^2

28)



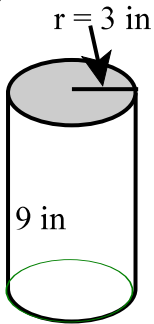
Base Area = $12\text{ m} \times 9\text{ m} \div 2 = 54\text{ m}^2$
 Height = 5 m
 Volume = $\text{BA} \times \text{H} = 54\text{ m}^2 \times 5\text{ m} = 270\text{ m}^3$

Surface Area:

Base: $12\text{ m} \times 9\text{ m} \div 2 = 54\text{ m}^2$
 Top: $12\text{ m} \times 9\text{ m} \div 2 = 54\text{ m}^2$
 Right: $5\text{ m} \times 9\text{ m} = 45\text{ m}^2$
 Front: $12\text{ m} \times 5\text{ m} = 60\text{ m}^2$
 Back: $15\text{ m} \times 5\text{ m} = 75\text{ m}^2$
 S.A. = 288 m^2

Give the surface area and volume of each figure below

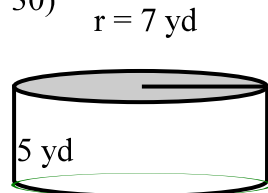
29)



SA:
 Top: $\pi(3)^2 = 9\pi$
 Bottom: $\pi(3)^2 = 9\pi$
 Middle: $\pi(6)(9) = 54\pi$
 72π
 $= 226.2\text{ in}^2$

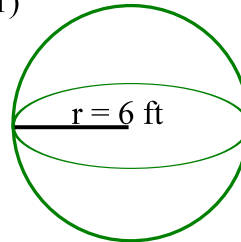
Volume:
 $\text{BA} \times \text{H} = (9\pi) \times 9 = 81\pi$
 $= 254.5\text{ in}^3$

30)



SA = 527.8 yd^2
 Volume = 769.7 yd^3

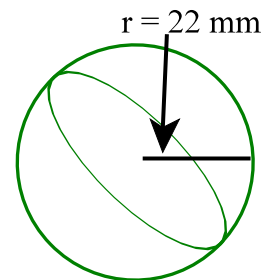
31)



SA = $4\pi(r^2)$
 $= 4\pi(6^2)$
 $= 4\pi(36)$
 $= 144\pi\text{ ft}^2$
 $= 452.4\text{ ft}^2$

Volume = $4\pi(r^3) \div 3$
 $= 4\pi(6^3) \div 3$
 $= 864\pi \div 3\text{ ft}^3$
 $= 904.8\text{ ft}^3$

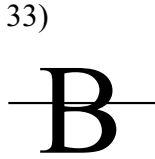

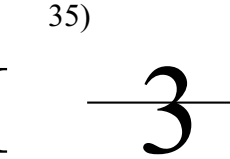
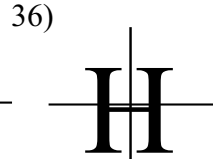
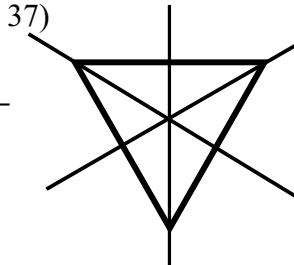
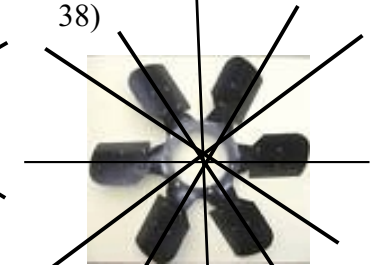
32)



SA = $1936\pi\text{ mm}^2$
 $= 6082.1\text{ mm}^2$

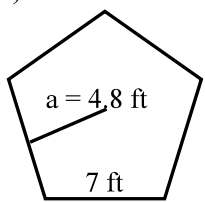
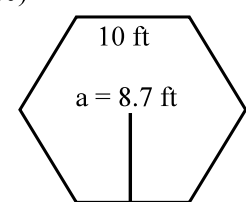
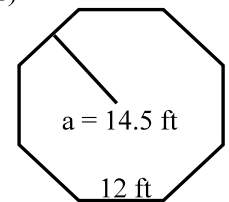
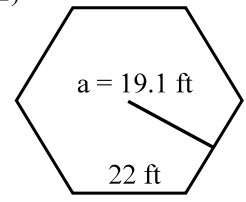
Volume = $10648\pi \div 3\text{ mm}^3$
 $= 44602.2\text{ mm}^3$

State the number of lines of symmetry in each figure below. Draw the lines.

33)  34)  35)  36)  37)  38) 

1 line 1 line 1 line 2 lines 3 lines 6 lines

Find the area of each polygon below.

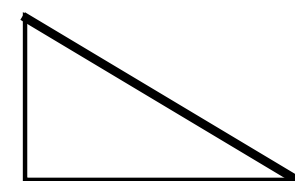
39)  40)  41)  42) 

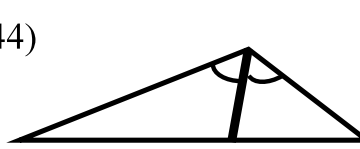
$A = \frac{Pa}{2}$ $A = \frac{Pa}{2}$ $A = \frac{Pa}{2}$ $A = \frac{Pa}{2}$

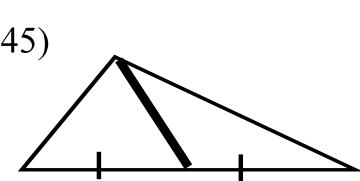
$A = \frac{35 \text{ ft}(4.8 \text{ ft})}{2}$ $A = \frac{60 \text{ ft}(8.7 \text{ ft})}{2}$ $A = \frac{96 \text{ ft}(14.5 \text{ ft})}{2}$ $A = \frac{114.6 \text{ ft}(22 \text{ ft})}{2}$

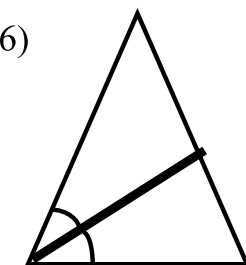
$A = 84 \text{ ft}^2$ $A = 261 \text{ ft}^2$ $A = 696 \text{ ft}^2$ $A = 1260.6 \text{ ft}^2$

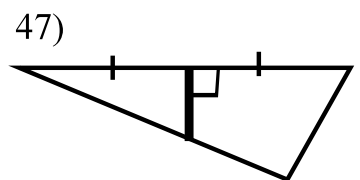
Identify the bolded segment in each triangle below.

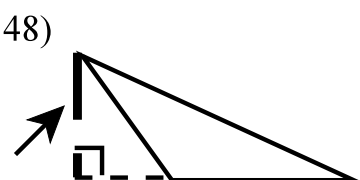
43)  Hypotenuse

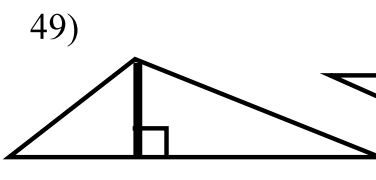
44)  Angle Bisector

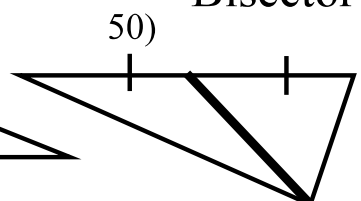
45)  Median

46)  Angle Bisector

47)  Perpendicular Bisector

48)  Altitude

49)  Altitude

50)  Median