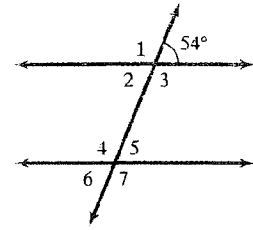


**MGF1106 TEST 3 REVIEW (15 POINTS) Name:**

In the diagram at the right, parallel lines are cut by a transversal.

Answer true or false:

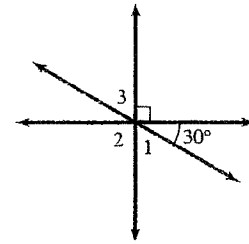
- 1) Angle 1 is an obtuse angle.      2) Angle 5 is an acute angle.  
 3) Angle 7 is a right angle.      4) Angle 6 is a straight angle.



Fill in the blank to make a true statement.

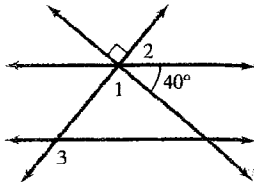
- 5) Angle 5 and angle \_\_\_ are vertical angles.  
 6) Angle 3 and angle \_\_\_ are alternate interior angles.  
 7) Angle 1 and angle \_\_\_ are alternate exterior angles.  
 Angle 2 and angle \_\_\_ are corresponding angles.  
 8) Find the measures of angles 1 through 7.

- 9) In the diagram at the right, find the measures of angles 1 through 3.

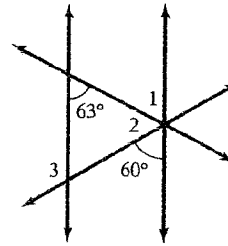


In the diagrams below, parallel lines are cut by two transversals. Find the measures of angles 1 through 3.

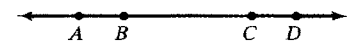
10)



11)



For the diagram at the right, find the following:



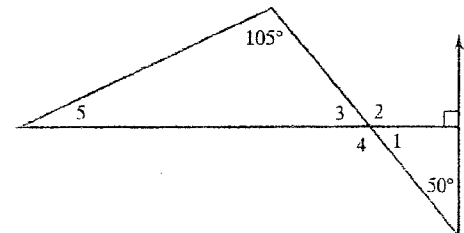
- 12)  $\overline{BC} \cup \overline{CD}$    13)  $\overline{BD} \cap \overline{AC}$    14)  $\overrightarrow{AB} \cap \overrightarrow{BC}$    15)  $\overrightarrow{AC} \cap \overrightarrow{CA}$    16)  $\overrightarrow{CB} \cup \overrightarrow{CD}$

An angle measures 37 degrees.

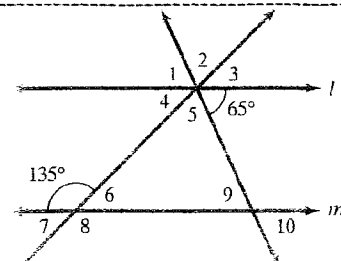
- 17) What is the measure of its complement?      18) What is the measure of its supplement?

- 19) An angle's degree measure is 6 more than twice that of its supplement. Find the measure of the angle.

- 20) For the diagram at the right, find the measures of angles 1 through 5.

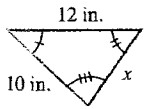


- 21) In the diagram at the right, parallel lines are cut by two transversals. Find the measures of angles 1 through 10.

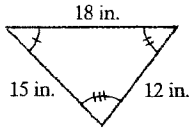


In the following problems, find the value of  $x$ .

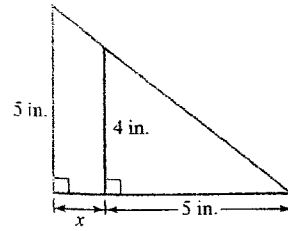
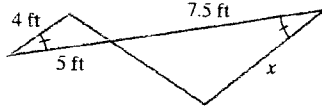
22)



23)

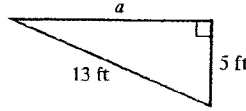


24)

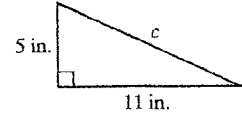


25) A tower casts a 108 foot long shadow at the same time and location that a 6 foot tall person casts a 4 foot long shadow. How tall is the tower?

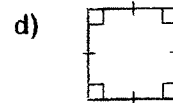
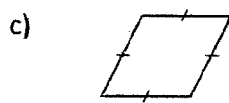
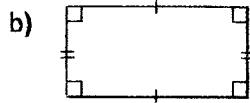
Find the missing length in each right triangle. 26)



27)

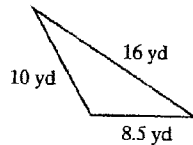


28) If a 16 foot long ladder reaches 15 feet up a wall, how far is the base of the ladder from the wall? (round your answer off to the nearest inch)

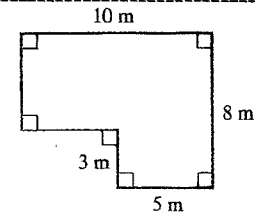


29) Which figure is a trapezoid? 30) Which figures are parallelograms? 31) Which figures are rectangles?

Find the perimeter of each polygon. 32)

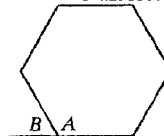


33)

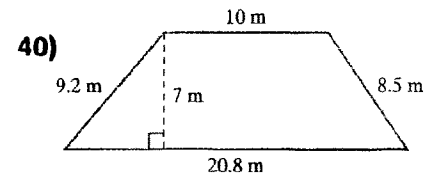
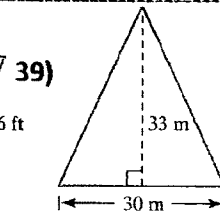
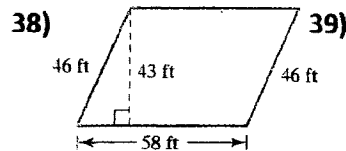
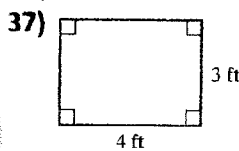
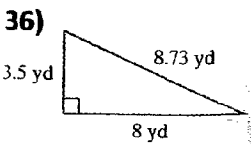


34) A rectangular lot measures 80 feet by 120 feet. If fencing costs \$4 per foot, what is the cost to fence the lot?

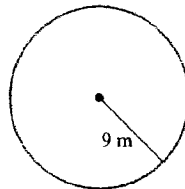
35) The diagram at the right shows a regular hexagon. Find the measures of angles A and B.



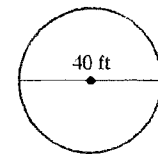
Find the area of each figure.



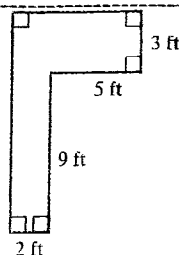
Find the circumference and area of each circle. 41)



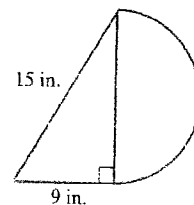
42)



Find the area of each figure. 43)

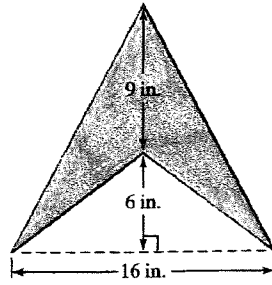


44)

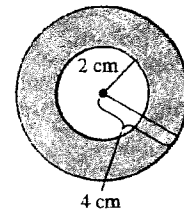


45) A rectangular room is 12 feet by 15 feet. If carpeting is \$22 per square yard, what is the cost to carpet this room?

Find the area of each shaded region. 46)



47)



A box is 7 feet long, 5 feet wide and 2 feet high.

48) What is the volume of the box?

49) What is the surface area of the box?

A cylinder has a diameter of 8 inches and a height of 10 inches.

50) What is the volume of the cylinder?

51) What is the surface area of the cylinder?

52) A cylinder is to be shipped in a box. The cylinder has a radius of 3 inches and a height of 7 inches.

The dimensions of the box are 9 inches by 8 inches by 7 inches. If the box is to be filled with packing material to protect the cylinder, what volume of packing material is needed?

**Answers:**

- 1) true    8) degree    9) degree    10) degree    11) degree  
 2) true    angle    measure    angle    measure    angle    measure    angle    measure  
 3) false    1    126    1    60    1    90    1    63  
 4) false    2    54    2    90    2    50    2    57  
 5) 6    3    126    3    60    3    130    3    120  
 6) 4    4    126  
 7) 7    5    54    12)  $\overline{BD}$     13)  $\overline{BC}$     14)  $\overrightarrow{BC}$     15)  $\overline{AC}$     16)  $\overleftrightarrow{AD}$     17)  $53^\circ$     18)  $143^\circ$     19)  $122^\circ$   
       6    6    54  
       7    126    22) 8 inches    23) 6 feet    24) 1.25 inches    25) 162 feet    26) 12 feet
- 20)    degree    27) 12.08 inches    28) 5 feet, 7 inches    29) a    30) b,c,d,e    31) b,d    32) 34.5 yards  
       angle    measure  
       1    40    33) 36 meters    34) \$1,600    35) angle A:  $120^\circ$ , angle B:  $60^\circ$     36) 14 square yards  
       2    140  
       3    40    37) 12 square feet    38) 2494 square feet    39) 495 square meters    40) 107.8 square meters  
       4    140  
       5    35    41)  $C = 56.55$  meters    42)  $C = 125.66$  feet    43) 39 square feet  
                $A = 254.47$  square meters     $A = 1256.64$  square feet
- 21)    degree  
       angle    measure    44) 110.55 square inches    45) \$440    46) 72 square inches    47) 37.70 square centimeters  
       1    65  
       2    70    48) 70 cubic feet    49) 118 square feet    50) 502.65 cubic inches  
       3    45  
       4    45    51) 351.86 square inches    52) 306.08 cubic inches  
       5    70  
       6    45  
       7    45  
       8    135  
       9    65  
       10    65