Geometry Formative assessment

1. Write the type of angles

a)

b)

c)

d)

e)

f)

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Solution

a) Acute angle
b) Right angle
c) Obtuse angle
d) Straight angle
e) Reflex angle
f) Vertically opposite angle
g) Alternate interior angles

6) True or False statement
a) Pairs of vertically opposite angles is always equal
b) The sum of the angles of a triangle is 180°
c) If the sum of two adjacent angles is 45°, then two adjacent angles are acute angles
d) If a line is perpendicular is one of two parallel lines, then it is also perpendicular to the other
e) Two lines are intersected by the transversal, and then the corresponding angles are equal
f) Can we have a triangle where all the interior angles are more than 60°?
g) Sum of two complimentary angles is equal to 90°
h) Sum of all the exterior angles of any polygon is always 360°

Solution
Multiple choice Questions

7) Find the value of $x$

\[ x + 36 + 36 = 180 \Rightarrow x = 108 \]

8. A pair of angles is called linear pair if the sum of two adjacent angles is?

| a) 180 | b) 90 | c) 270 | d) 360 |

**Solution** (a)

9)

Find the value of $x$, $y$ and $z$

| a) $x=110$, $y=70$, $z=80$ |
b) \( x=70, y=110, z=60 \)  
c) \( x=70, y=100, z=70 \)  
d) \( x=70, y=110, z=70 \)

**Solution (d)**

Vertically opposite angle theorem and linear pair axiom can be used to find the answer.

10. An exterior angle of the triangle is \( 110^0 \). And its two opposite interior angles are in the ratio 5:6. What are the values of those angles? 
   a) 50, 60  
   b) 25, 30  
   c) 35, 42  
   d) 40, 48  

**Solution (a)**

11. 

Lines \( l \parallel k \) and \( m \parallel n \). Find the value of angle \( z \)

   a) 45  
   b) 60  
   c) 70  
   d) 50  

**Solution (b)**

12.
Find the value of $x$

a) $67^\circ$
b) $71^\circ$
c) $57^\circ$
d) None of these

**Solution (a)**

**Fill in the blanks**

a) Sum of two supplementary angles is .................
b) Two lines parallel to the same line is ........ each other
c) An acute angle is always less than .............
d) Angles forming a linear pair are ............... 
e) If one angle of triangle is equal to the sum of other two angles, then the triangle is ............
f) If two straight lines intersect, the adjacent angles are ..................

**Solutions**

a) 180
b) parallel
c) 90
d) supplementary
e) right angle triangle 
f) Supplementary

**Table Type Question**

<table>
<thead>
<tr>
<th>Angle</th>
<th>30</th>
<th>80</th>
<th>11</th>
<th>87</th>
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<tbody>
<tr>
<td>Complementary angle</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Supplementary angle</td>
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</tbody>
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**Solution:**

Complementary $= 90 - x$

Supplementary $= 180 - x$