***Cruise School: Gebriel campus***

***Individual Assignment***

***Subject: Mathematics***

***Grade: 10***

Total weight: equivalent to 6th model / mid exam

Submission date: on the day school reopen.

Assignment should be submitted in hard copy.

Assignment should be presented individually.

April 2020

**Assignment 1 ( Application on trigonometry )**

1. **choose the correct answer from the given alternatives and (justify your answer)**
2. The angle of elevation and depression of the top of building from the foot and the top of a tower are 300 and 450 respectively if the building is 20 m high then what is the height of the tower ?
3. 20 B. 20(1+m C. 40 (1+) m D. 40m
4. Two points on a level ground are 500m a part, the angle of elevation from these points to the top of a tower are 450 and 600 respectively what is the height of the tower ?
5. 50m B. 50 ( 1+m) C. 250 (+3)m D. 500(+1)m
6. From a cliff 40m high the angle of a could is 300 and the angel of depression of its image in a lake is 600 . find the height of the could above the lake ?
7. 80m B. 40m C. 120m 40m
8. If ABc is a right angled triangle right angled at C if cos B= and = 2cm , which of the following is Not true ?
9. m> m
10. 1- 2 =
11. 2 sin B cos B =
12. Perimeter of
13. Suppose a building casts a shadow of length 45m, when the angle of elevation of the sun is 300 . How high is the building ?
14. 45 C.
15. D. 15
16. Two men A and B stand on opposite side of a tower 15m long if A observes the top of the tower at top of the tower at angle of elevation 600 and B observes the same point at an angel of elevation 300, then how for a part are the two men ?
17. 600 B. 450 C. 100 D. 200

**Unit 6**

**Theorems on triangle**

* Median of a triangle
* A median of a triangle is a line segment drawn from any vertex to the midpoint the opposite side

A

L

N

C

B

C

M

* Show that and are medians

1. = and =
2. = and =
3. = and =

* Altitude of triangles
* A line segment drawn from a vertex perpendicular to the opposite side or to the opposite side produced

In the figure below ABC

A

F

E

C

G

B

Show that

Angel bisector of triangles

The angel bisector of a triangle are concurrent at a point which his equidistant from the sides of a triangle

Consider the right angled triangle ABC right angel at C , CD

C

B

D

A

= x ( Altitude theorem )

= x

= x

7. In the right triangle with lengths b, c, h, c and y show below, which of the following is Not true ?

**B**

x

A. = y (x+y) B. = x (x+y)

**h**

**C**

y

C. = D.

**A**

**b**

**C**

8. In the figure below if and the sides measured in cm, what is the area of the figure ?

A. 8cm2 B. 10cm2 C. D. 12

C

**B**

**D**

5m

2

2

A

E

9. In the figure below , and m(<BDC)= 2m(<A) = 700 what is m(<B)?

A. 200  B. 250 C. 350 D. 550

**A**

**C**

**D**

**B**

1. In the figure if is a diameter of the circle // , m= 300 and m= 200 , then what is the m(<BCD)?

E

B

A

C

D

1. 1300 B. 1200 C. 1100  D. 1000
2. In the parallelogram ABCD shown below if AB= 4cm , BC = 6cm and m(<ABC) = 450 what is the area of ABCD ?

A

D

4cm

C

B

6cm

1. 24 B. 6 C. 12 D. 12
2. In ABC shown below is the intersection point of the medians and , if the length of = 4cm what is the length of ?
3. 8cm B. 12cm C. 6cm D. 4cm

A

E

Q

B

D

C

1. The diagonals of a rhombus measure 12cm and 16cm which of the following relation is true about the interior obtuse angle B of the rhombus?
2. Tan P/2 = 0.75 C. tan B/2 = 0.6
3. Cos B/2 = 0.8 D. sin B/2 = 0.8
4. In the figure O is the center of the circle with radius 9 cm and m (AB) = 70o what is the area of the un shaded region
5. cm2 B. cm2 C. cm2 D. cm2

A

O

B

1. Let quadrilateral ABCD and the given conditions as shown in the figure below if = 12cm, then what is the area of this quadrilateral?
2. 6 C. 36(1+
3. 18(1+ D. 18(

D

300

B

300

A

C