SSLC Maths Answer Key 2019

1
(a). <ABC=40
(b).<ADC=140
2.
(a). 7/7
(b).(1+2+3+4+5+6+7)/7=(7*8)/7*2=4

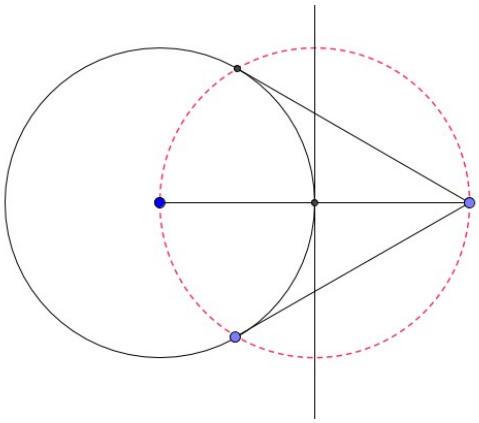
3.
A(2,4) B(4,8)
slope=2
y-4/x-2=2
y=2x

k=-2
4.
(a)
P(1)=1^2+2*1+5 =8
(b) x-1 is factor ..P(1)=0
1^2+2*1+k=0
k=-3

5.
(a)
Remanider is 2
(b) 101,108,115,.....
last 3 digit term is 997

6.<ADB=90
<ACB=110
<AEB=70
7.
(a) No. to be added is 3^2 =9
(b) a=8
(c) 2*1*√b=a
a^2 =4b
8.
(a). <A=46
(b) tan 44=AB/BC
(c) tan 44 * tan 46= AB/BC*BC/AB=1

9.



10.

(a) A point on x -axis (x,0)
$(x-3)^2+(0-4)^2=4^2$

$x-3=0$
$x=3$

(b) $(x-3)^2+(0-4)^2=5^2$
$(x-3)^2=25-16$
$x=6$

11.

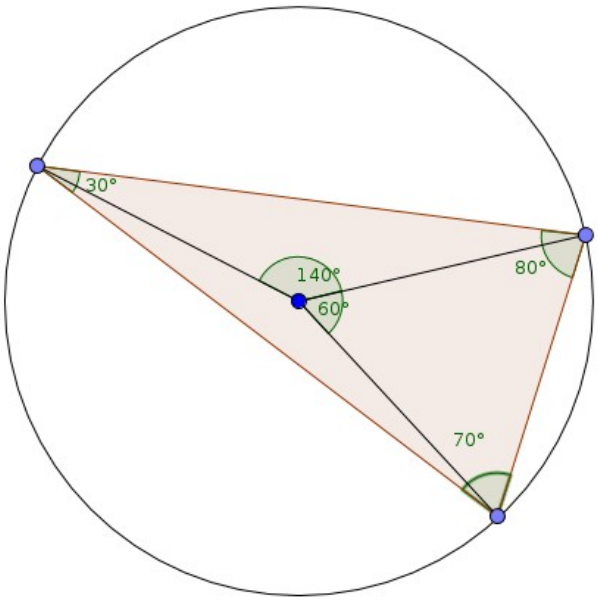
b=30
e=25

base edge =30
$l=\sqrt{25^2-15^2}=20$
LSA=2bl =2*30*20=1200 sq cm

12.

length of smallest side 4 cm

13.
(a)



1+2+3+.....=100=100*101/2=5050

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(b) 1+3+5+.....+99 =50*50 =2500
(c) 2+4+6+.....+100=50*51=2550
(d) 3+7+11+.....=199=50/2[3+199]=25*2=5050

14.

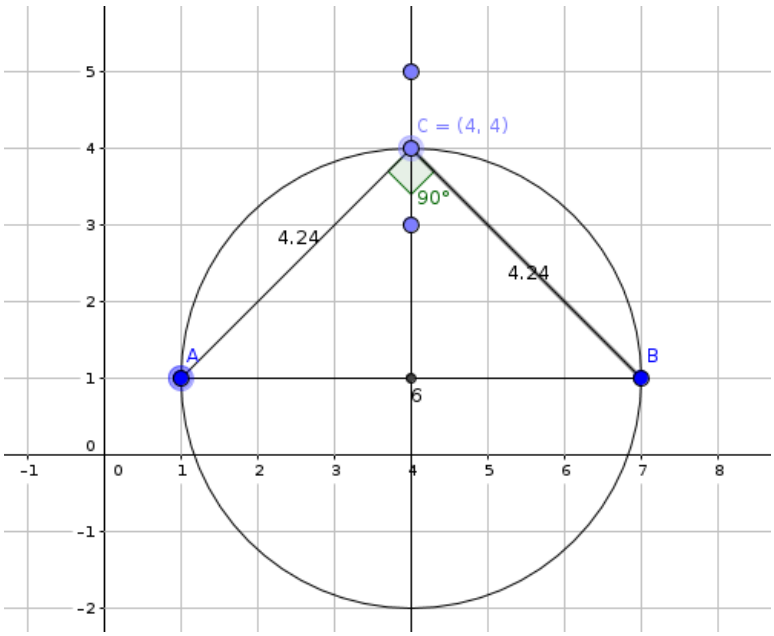
a) P(red)=7/24
Green+Blue=24
P(B)=1/3=8/24
Blue =8

Green =24-{8+7}=9
P(green}=9/24

15.
(x-2)x=440
x^2-2x=440
x^2-2x+1=440+1
x-1=21
x=22

16.(a) <A=45
AP=PD=x
AP=PD=5/√2
(b) Area(Triangle) =1/2*5/√2*5/√2 =25/4
(c) Area(II gm)=bh= 5/√2*5/√2 =25/2

17.



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18.

<PAC=<ABC

(b)<BAC=180-{<B+<C}

=180-{x+180-y}=x+y

(c) <PAQ=x+(y-x)/2 =(2x+y-x)/2=x+y/2

19.

(a) $P(0)=a(0)^2+b(0)+c=-5$

$c=-5$

(b) x-1 is a factor

$P(1) = a(1)^2+b(1)-5 =0$

$a+b-5=0$

$a+b=5$

(c) $3x^2+2x-5$, $4x^2+1x-5$,

20.

x=160 ,

(a)

Central angle of remaining (X) =200

(b) 160/360=8/R

R=18 l=18

r/18=200/360

Radius of other 10 cm

(c) Slant height of cones 180

21.

A(0,y) x=0

OA= 3*0-2y=6

-2y=6

y=-3

A(0,-3)

OA=3

B(x,0)

3x-2*0=6

3x=6

x=2

B(2,0)

OB=2

x=y

3x-2x=6

x=6

(6,6)

22.

a. $x_1+x_2+x_3=$ **2+3+4/9=9/9=1**

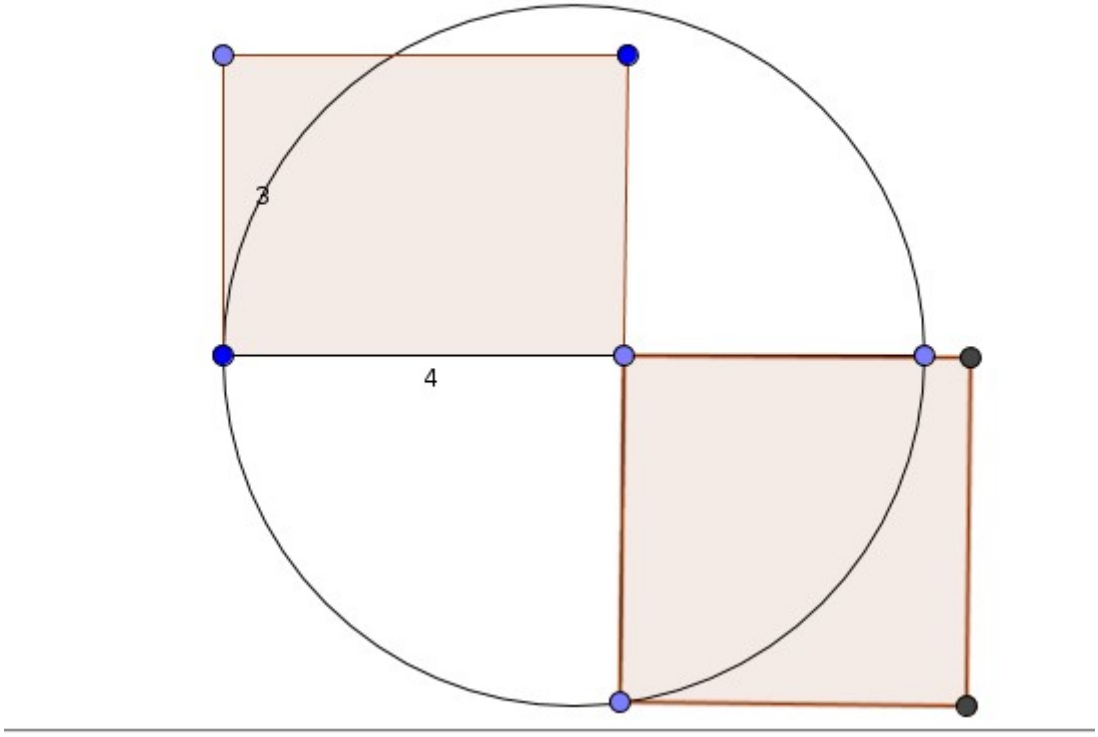
b. $x_4+x_5+x_6$ **=5+6+7/9=18/9=2**

c. Sum of first 9 terms 2+3+....+10/9=54/9=6

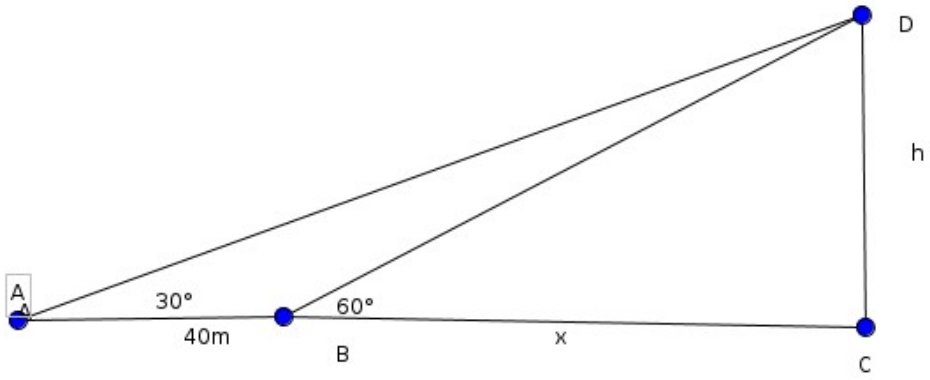
d. Sum of first 300 terms = 2+3+4+.....+301/9=300/2{2/9+301/9}

=150*303/9

23.



24.



tan 60=h/x
h=x tan 60
tan 30=h/x+40
h=(x+40)*tan 30 , x tan 60=(x+40)*tan 30 x**√3=(x+40)/√3**
3x=x+40
2x=40
x=20 width of river =20m

25.

AQ=4 ,AR=4
CQ=6,CP=6
AB=AC..AC=AQ+CQ=6+4=10
AB=10
BP=6
CP=6
Perimeter =12+10+10=32
Area =**√s(s-a)(s-b)(s-c) =√16*4-6*6=48**
r=Area/Semi-Perimeter =48/16=3 cm

26. Cone Vol=1/3π r^3
Hemisphere Vol=2/3π r^3
Sphere Vol=4/3π r^3
Cylinder Vol =π r^3

Ratio =1/3π r^3 : 2/3π r^3 : π r^3 : 4/3π r^3 … 1:2:3:4

N * 1/3π r^3 =4/3π r^3
N *6*6*6=4*6*6*6
N=4

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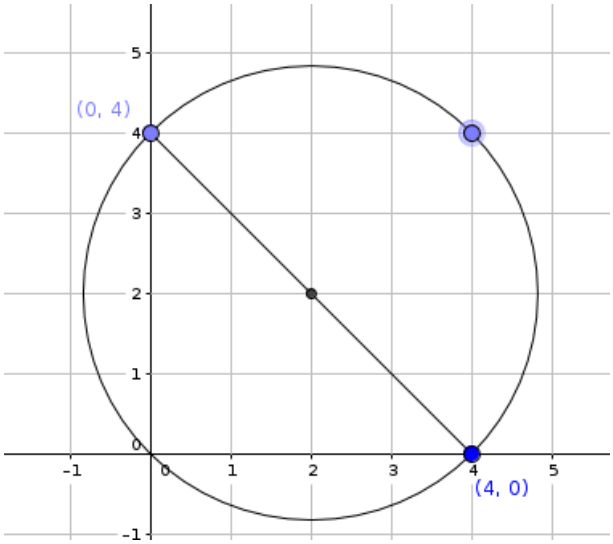
27.
C(2,2)
radius= $4\sqrt{2}$
$(x-2)^2+(y-2)^2=32$

$(x-2)^2+(x-2)^2=32$
$2(x-2)^2 =32$

(x-2) =4
x=y=4



28.

Height	No. Children	Cum Freq
130-140	7	7
140-150	9	16
150-160	10	26
160-170	10	36
170-180	9	45

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TOTAL	45	

N=45
Position of the Child with median height =45+1/2 =23

assumed height of 17th child= 150-151 mid value 150.5
Median = 150-151(17 th)
,151-152(18th),
152-153(19th) ,
153-154(20th)
154-155(21th)
155-156(22th)
156-157(23 rd) ...156.5

29.

a. **Remainder =4**
b. **2^3,2^6,2^9,.....**
c.2019-3/3 ..Remainder is 0 then Yes a term
d. 1
e. 3n-2
f.2^{3n-2}
