**2021 MARKING SCHEME**

1. -2(5 + 3) - 9 3 + 5 = - 14

-3 x -5 + (-2) x 4 7

= -2

1. LCM of 9, 15 and 21

32 x 5 x 7 = 315 minutes

Last time ringing together

11.00 2300

5.15 515

5.45 p.m. 1745hrs

1. let a technician be x and artisan be y

3x + 2y = 9000

4x + 1y = 9500

8x+2y = 19000

3x +2y = 9000

= = 2000..........................

Hiring a technician = 2000

Hiring artisan

4(2000) + y = 9500

Y= 1500

2(2000) + 5(1500) = 11,500

1. a) sh 77.24 x 100,000

= sh 7,724,00

b) Sh 77.24 x 100 000

= 63172

122.27

1. 3x + (x-20) = 1800

4x = 2000

X = 500

(x-20)n=360

30n=360

n = 12

1. =

=

= 75

1. let mother’s year be x and son’s be y now:

X+14=2(y+14) .................................(i)

X+14= 2y+ 28

x-2y = 14...........................................(ii)

(x-4)+(y-4) =30

X+y=38 ............................................(iii)

(iii)-(ii)

X+y=38

-x+2=-14

3y=24

Y=24 x=30

At son’s birth: mother’s age

30-8=22

1. Sin (x + 600) = cos 2x

X + 60 + 2x = 900

3x = 30

x = 100

Tan (10 + 60)0 = tan 700

2.748(4.S.F) from tables

1. 2r2 + 2rh = 154

r = h

2r3 + 2r2 = 154

4r2 = 154

r =

= 3.500

diameter = 2r= 3.500 x 2

= 7.00 (s dp)

1. Volume of plate = 1.05 x 100

8.4

= 125cm3

L = = 25cm



1. From 0700h Monday to 1900h Wednesday

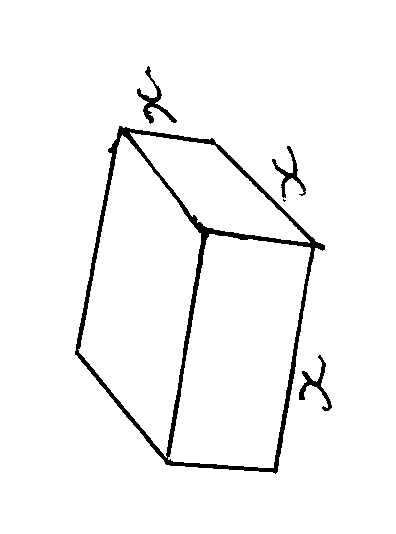
= 24 x 2 + 12 h

=60h

Time lost = 60 x 15 = 900 sec

=15 min

Time shown on clock:

1900 h – 15 min = 1845 h

= 12

?

12

12

= =16.97 cm

1. a) x-53x - 8

-2x-3

3x - 8 2x -3

x5

1.5 x 5

0

1

2

3

4

5

6

b)



=

Magnitude =

= ≈ 5.1

1. (a) mode

=22

(b) Median

15,15,16,19,19,20,20,21,22,22,22,26 ,27,28

Median =

= 20.5

1. a) mass after decrease

112 x

= 105 kg

Total decrease

(112-105) x 540

=3780 kg

b) (i) no. of 90kg bags

=630

Least number of trips

= 5.25

6 trips

ii) Expenses

Buying price = 1500 x 630 = 945000

Transport = 1500 x 630 = 945000

Total 945000 + 15000

Selling price per bag:

= = 1920

1. a) 10.5x100x6x100=630,000cm3

Area of the tile = 30x30 = 900 cm2

No of tiles =

= =700 tiles

b) i) 1 carton = 20 tiles

? = 700 tiles

=35 cartons.

1 carton = 800 sh.

35 Cartons = = 28,000sh

1 room =28,000 sh.

15 rooms = =420,000sh

= sh. 420,000

ii) Transport = 2000

subsistence = 600

2000 + 600 = 2600sh

Total cost = 420,000 +2600

=Ksh. 422,600

x 422,600 = 52,825sh

Profit = 52,825sh

Cost price = 422,600sh

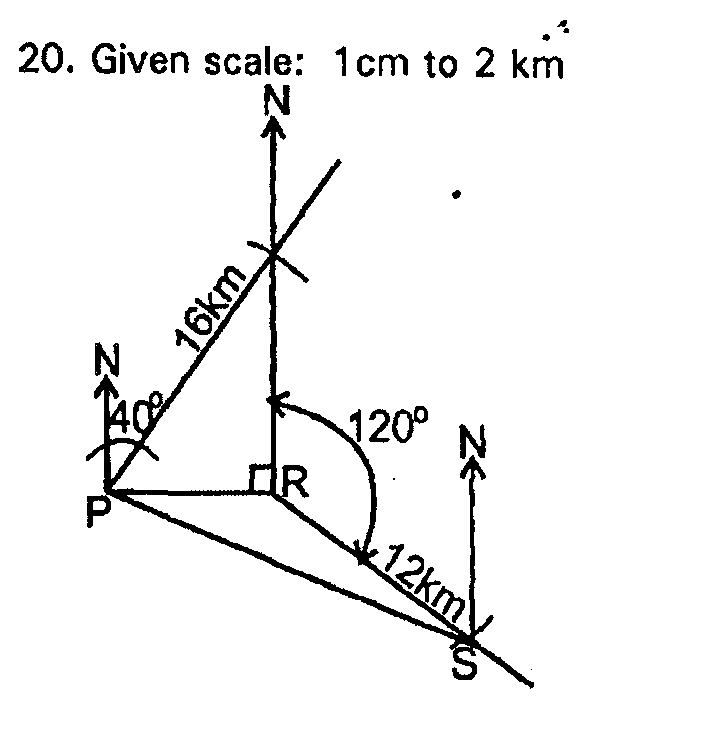
Selling price = 422,600sh + 52,825

=475,425sh

35 cartons = 475,245

1 carton= 475425

1 carton = 13,584sh

1. a)

b) i) Distance of P from s =10. 8 + 0.1cm

ii) < PSN = 74 + 10

earing of P from S = 286 + 10

c) area of PQR = 1/2 x 10.2 x 12.2

= 63.44km2

Area of PRS = 1/2 x 10.2 x 2 sin-600

= 30.6km2

Area of ranch PQRS

= 62.22 + 30.6

= 92.82km2

2. Equation of L

Gradient =

=3

Equation =

=

1. Equation of P

=

= 3y + x =17

1. Equation of Q

=

=

intercept

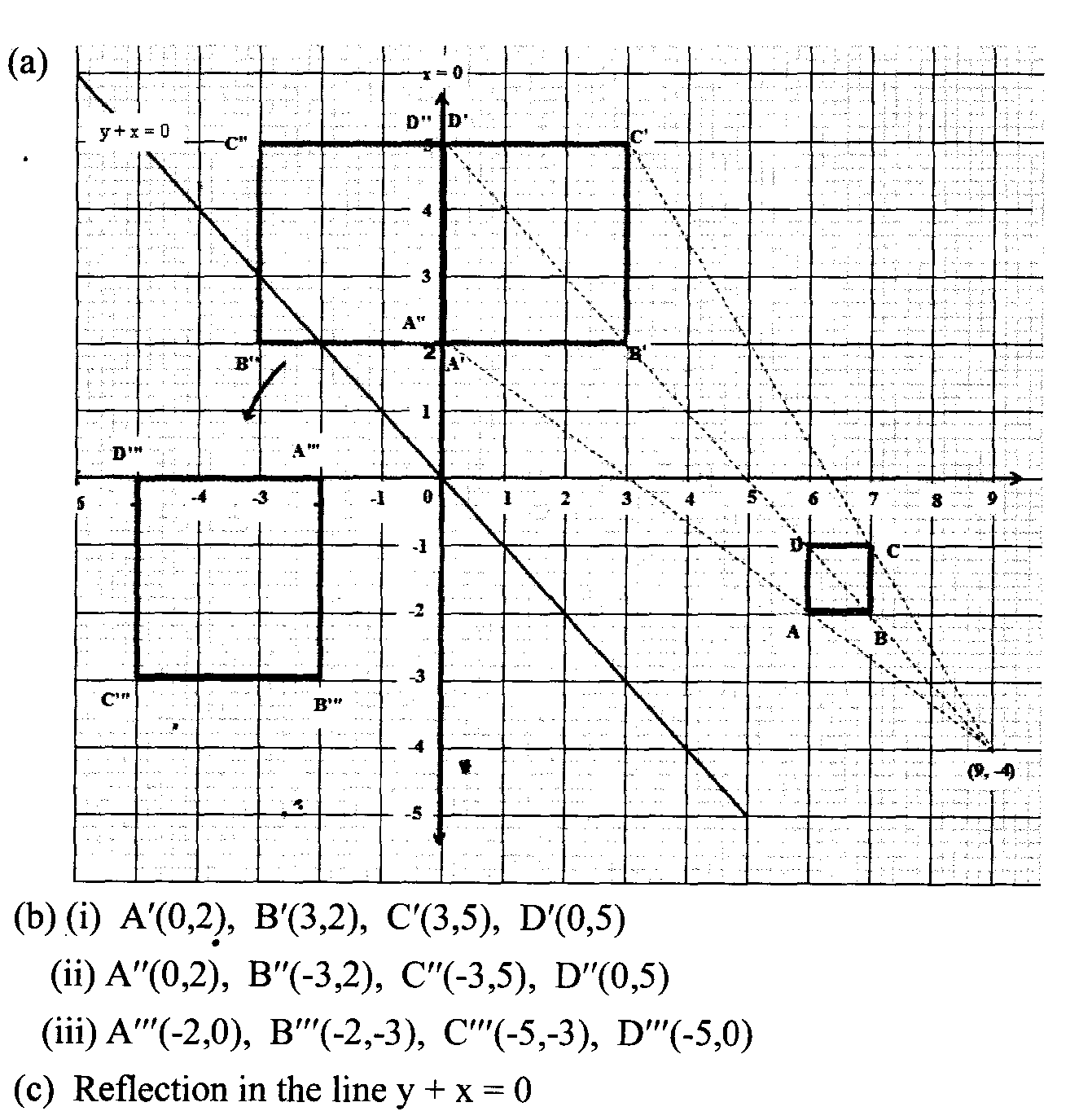
When = 0 = +

intercept

When = 0 = 1

1. Intersection of lines P and Q

Subset

1. 
2. a) i) =

R = = 3 cm

ii) Volume of material drilled out

= x 4 = 12

b) Slant height of cone

= = 15 cm

c) Surface area of solid after conical has been drilled

x 9 x 9 x 15 + x () + x 3 x 5

= (135+72+15)

= 222

1. 15m/s
2. Maximum speed

1. (i) =

= 1.5m/s2

(ii) = = 1.5m/s2

=

=26.25 m/s

1. (a) total sales = sh 360 x 500

= sh.180,000

Commission

= sh (180,000 – 100,000) x 2/3

= 13600

(b) (i) New salary

= sh.(12000 + 12000 x 10/100)

= sh. 13200

Commission paid

= Sh (17,600 -13,200)

= Sh.4400

Commission is paid on sh.4400 x **100/2**

= 220,000

Total sales = sh.220,000 + 100,000

=320,000/=

(ii) No of handbags sold = = 640