Area Calculation - Online Quiz

Following quiz provides Multiple Choice Questions (MCQs) related to **Area Calculation**. You will have to read all the given answers and click over the correct answer. If you are not sure about the answer then you can check the answer using **Show Answer** button. You can use **Next Quiz** button to check new set of questions in the quiz.

Q 1 - The edge of a story of a room is 18m. What is the region of four dividers of the room, if its stature is 3m?

A - $21m^2$

B - $42m^2$

C - $54m^2$

D - $108m^2$

Answer : C

Explanation

```
Perimeter= 2 (L+b)=18 and height =3m
Area of 4 walls = 2(l+b)*h= (18*3) = 54 sq.m
```

Hide Answer

Q 2 - The length of a rectangle is expanded by 10% and its expansiveness is diminished by 10%. At that point, the range of the new rectangle is:

A - Neither expanded nor diminished

B - expanded by 1%

C - Diminished by 1%

D - diminished by 10%

Answer : C

Explanation

```
Let length be L unit and breadth be b unit.
Area = Lb sq.units
New length = (110/100*L) = 11L/10, new breadth = (90/100*b)= 9b/10
```

```
New area = (11L/10 *9b/10) Sq. units= (99/100 *Lb)
Area decreased = (Lb-99/100 Lb) sq.units = Lb/100 sq. units
Percent decreased = (Lb/100*1/lb*100) %= 1%
```

Hide Answer

Q 3 - If every side of a Square is expanded by 4cm, then its territory is expanded by 60m^2. The side of the square is:

A - 12 cm

B - 13 cm

C - 14 cm

D - none of these

Answer : D

Explanation

```
let the side of the square be x cm. then,
(x+4) ²-x²= 60 ⇒ 8x+16= 60 ⇒8x=44 ⇒x= 5.5cm
∴ Each side = 5.5 cm
```

Hide Answer

Q 4 - The range of a rectangle is 144m long is the same as that of a square of side 84m. The width of the rectangle is:

A - 7 m

B - 14 m

C - 49 m

D - cannot be resolved

Answer : C

Explanation

```
Let the width be x meters. Then,
1448* x= 84*84 ⇒ x= 84*84/144 =49m
∴ Width of the rectangle is 49 m.
```

Hide Answer

Q 5 - The area of a square is 50 cm^2. The area of the circle drawn on its diagonal is:

A - 25π cm^2

B - 50π cm^2

C - 75 πcm^2

D - $100\pi cm^2$

Answer : A

Explanation

$1/2*(diagonal)^2 = 50 \Rightarrow (diagonal)^2 = 100 \Rightarrow diagonal = 10cm$
Radius of circle drawn on its diagonal= 5cm
Area of this circle = $[\pi*(5)^2]\ cm^2 = 25\pi cm^2$

Show Answer

Q 6 - If the height of a triangle is decreased by 40% and its base is increased by 40%. What will be the effect on its area?

A - No change

B - 8% decrease

C - 16% decrease

D - 16%increase

Answer : C

Explanation

```
Let the height be h and base= b. then, area = (1/2 bh) sq. units.
New height = (60% of h) = (60/100) h= 3h/5,
New base = (140% of b) = (140/100) b= 7b/5
New Area = (1/2 *7b/5 *3h/5) sq. unit= (21/50) bh sq. unit
Decrease in area = {1/2 bh- (21/50) bh} = 4/50 bh.
Decrease % = (4/50 bh * 2/bh *100) % = 16%
```

Hide Answer

Q 7 - The perimeter of an isosceles triangle is 14cm. Their lateral side andthe bases are in the ratio 5:4. The area of the triangle is:

A - 1/2 $\sqrt{21}cm^2$

B - 3/2 $\sqrt{21}cm^2$

C - $\sqrt{21}cm^2$

D - $2\sqrt{21}cm^2$

Answer : D

Explanation

```
Let lateral side = 5x cm and base = 4x cm
∴5x+5x +4x= 14 ⇒ 14x= 14 ⇒x= 1
∴ Sides are 5 cm, 5 cm and 4 cm.
S=1/2 (5+5+4) = 7, (s-a) = 2, (s-b) = 2 and (s-c) =3
∴ Area = √{s(s-a) (s-b) (s-c)}= √7*2*2*3= √84= √4*21= 2√21 cm²
```

Hide Answer

Q 8 - A typist uses a paper 30cm*15 cm. He leaves an edge of 2.5cm at the top and the base and 1.25 cm on either side. What rate of paper range around accessible for writing?

A - 65%

B - 70%

C - 80%

D - 61.1%

Answer : D

Explanation

Total area = (30*15) cm^2
Area used = [(30-1.25*2)* (15-2.5*2)]
= (27.5*10) cm^2 = 275cm^2
Percentage of area used = (275/450*100) % = 61.1%

Hide Answer

Q 9 - The border of a rhombus is 52cm and the length of its littler Inclining is 10cm. The length of the more extended slanting is:

A - 10.4 cm

B - 12 cm

C - 18 cm

D - 24 cm

Answer : D

Explanation

Each side = 52/4=13cm
Let AC be the smaller diagonal, Then AC= 10cm
Let AC and BD intersect at o. Then ∠AOB= 90∘ and AO= 1/2 AC= 5cm
In right Δ AOB, we have AB= 13cm, AO=5cm
∴ OB =√ (ab) ^{2}-(OA) ^{2}= √ $(13)^2$-$(5)^2$= √169-25
=√144=12cm
∴ BD =2*BO= (2*12) =24 cm

Hide Answer

Q 10 - What is the region of the shaded bit if every side of the square measures 21cm?

A - 86.5 cm^2

B - 102 cm^2

C - 94.5 cm^2

D - 81.5 cm^2

Answer : C

Explanation

Area of the shaded region= $[(21)^2-22/7* (21/2)^2]$
= (441- 693/2) cm^2 = (441- 346.5) cm^2
= 94.5 cm^2

Hide Answer