Class:8 **Worksheet No :5** **January 2014**

1. A swimming pool is 25m in length, 20m in breadth and 5m in depth. Find the cost of cementing the floor and walls at the rate of Rs 36 per square metre.

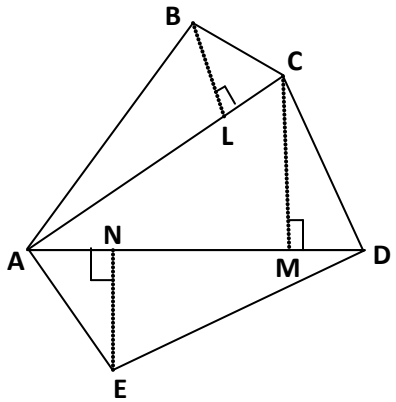
2. A well of inner diameter 10m is dug 14m deep. Earth is taken out of it is spread out all around to width of 5m to form an embankment. Find the height of embankment.

3. An iron pipe 20cm long has exterior diameter equal to 25 cm. If the thickness of the pipe is 1 cm, find the total surface area the pipe.

4. Two cubes each of side 6cm are joined end to end. Find the volume of the resulting Cuboid.

5. The parallel sides of a trapezium are 20cm and 10cm.Its non parallel sides are both equal, each being 13cm. Find the area of the trapezium.

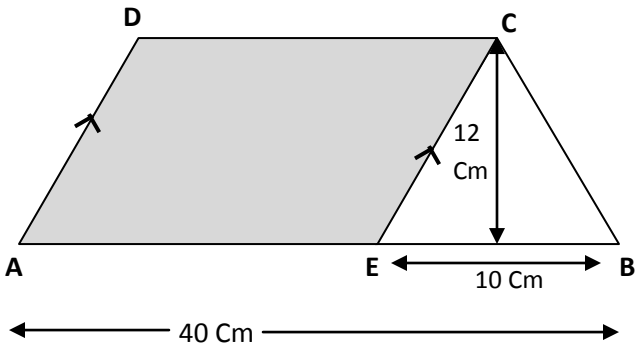
6. Find the area of pentagon ABCDE in which BL $\perp$ AC, CM $\perp$ AD and EN $\perp$ AD such that AC=10cm, AD=12cm, BL=3cm, CM=7cm and EN=5cm.



7. The diameter of a circular park is 66m. Outside the park, there is a path 4m running around it. Find the cost of turfing the path at Rs 2.50 per square metre.

8. A water tank is 3m50cm long, 2m wide and 1m50cm deep. How many litres of water can it hold?

9. Find the area of the shaded part



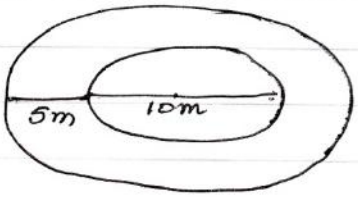
10. Find the area of a isosceles triangle whose base is 18cm and one of its equal side is 15cm.

CLASS: VIII
SUBJECT: MATHEMATICS.

ANSWER KEY TO WORKSHEET-2.

1. Use $2h(l+b)+lb$ to find out area of the swimming pool and then multiply with the rate of cementing.
Answer :- Rs. 34,200.

2. Inner radius $r = \frac{d}{2} = \frac{10}{2} = 5m$



Volume of earth dug out $= V = \pi r^2 h$
$= \frac{22}{7} \times 5 \times 5 \times 14$
$= 1100 m^3$

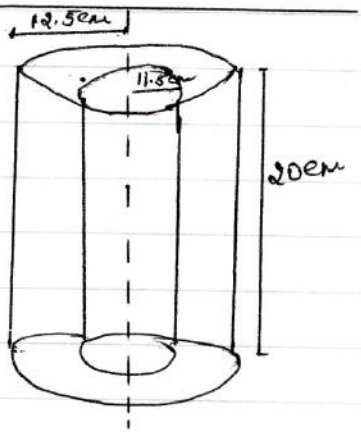
Radius of the well including embankment $= 5m + 5m$
$R = 10m$

Area of the embankment = Area of the well including embankment − Area of well only
$= \pi R^2 - \pi r^2 = \pi (R^2 - r^2)$
$= \frac{22}{7}(10^2 - 5^2) = \frac{22}{7} \times 75 m^2$

∴ Height of the embankment $= \frac{\text{Volume of earth dugout}}{\text{Area of the embankment}}$

$= \frac{1100}{\frac{22}{7} \times 75} = \frac{7 \times 1100}{22 \times 75} = 4.67m$

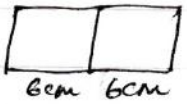
3. External radius $R = \frac{25}{2} = 12.5cm$
Inner radius $r = (12.5 - 1) = 11.5cm$
Total Surface area of the pipe =
External curved surface area + Internal curved surface area + 2 (Area of the ring of the base)



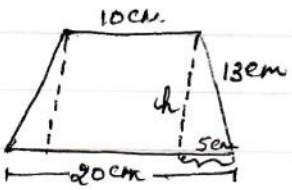
ANSWER KEY TO WORKSHEET-2.

3. Total surface area of the pipe $= 2\pi Rh + 2\pi rh + 2\pi(R^2 - r^2)$
Answer:- $3168\ cm^2$

4. $l = 6+6 = 12cm$ $b = 6cm$, $h = 6cm$.
$V = 432\ cm^3$



5. Find out h using Pythagoras theorem $(h^2 = 13^2 - 5^2)$
$h = 12cm$
$A = 180\ cm^2$



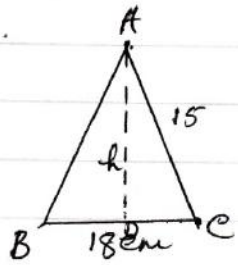
6. Area of pentagon ABCDE $= 87\ cm^2$

7. Cost of turfing the path = Rs 2200.

8. $l = 3.5m$, $b = 2m$, $h = 1.5m$.
Find out $V = lbh$.
$1m^3 = 1000l$
Capacity of the water tank = $10500\ l$

9. Area of the shaded part = Area of trapezium ABCD − Area of triangle CEB
$= 360\ cm^2$

10. Use Pythagoras theorem find out h. $h^2 = 15^2 - 9^2$
Area of the isosceles triangle $= 108\ cm^2$



12. अन्वये रिक्तस्थानपूर्तिं **1/2×5=5**

(क) (i) लोका: (ii) द्रष्टुम् (iii) आत्मानम् (iv) खिन्नम् (v) पश्यन्ति।

(ख) (vi) धर्ममोक्षसान्वितं (vii) ज्ञानकर्मान्वितम् (viii) एकमार्गैः (ix) आराधयत् (x) अनारतम्।

13. प्रश्न निर्माणं **1×5=5**

(i) (ब) केन (ii) (ब) कस्य (iii) (अ) केन (iv) (ब) कुत्र (v) (अ) कस्मात्

14. घटनाक्रम– **1/2×10=5**

(i) (ii) लक्ष्मीधर: विद्वान् भोजस्य गुणै: आकृष्ट:------

(ii) (i) राजा नगरपालम् नगरात् निरक्षरं जनं निष्कासयितुम्------

(iii) (viii) नगरपाल: एकस्य तन्तुवायस्य गृहं------

(iv) (v) तन्तुवाय: वयनकार्ये व्यस्त:-----

(v) (iii) लक्ष्मीधर: तम् पृच्छति–कविता कर्तुम् जानासि------

(vi) (vii) तन्तुवाय: वदति–कार्ये व्यस्त: अहं कथं------

(vii) (vi) नगरपाल: तं भोजस्य सभाम् आनयति------

(viii) (iv) तन्तुवायस्य रचनां श्रुत्वा भोज: तस्मै------

(ix) (ix) राज्य तन्तुवायाय स्वर्णमुद्रा: अर्पयति-----

(x) (ix) प्रसन्नवदन: राजानाम् अभिवाद्य गृहं प्रयति------

15. शब्दार्था: **1×5=5**

(i) (ब) परित: (ii) (स) समीपम् (iii) (ब) द्रुमा: (iv) (अ) त्यक्त्वा (v) (द) गमनं कृत्वा।

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