Unit 1 Midterm Review
Answer Section

MULTIPLE CHOICE

1. ANS: C
2. ANS: A
3. ANS: B
4. ANS: D
5. ANS: D
6. ANS: B
7. ANS: A
8. ANS: A
9. ANS: B
10. ANS: D

SHORT ANSWER

11. ANS:
    1.7

12. ANS:
    36, 0.36, 0.0036

13. ANS:
    144 and 169
    $\sqrt{144} = 12$
    $\sqrt{169} = 13$

14. ANS:
    Any decimal between 6.76 and 7.29
    For example: 7.03 and 7.08

15. ANS:
    The surface area of the object is 18 cm^2.

16. ANS:
    The surface area of the composite object is 2784 cm^2.

17. ANS:
    The area that needs to be painted is about 1472 m^2.

18. ANS:
    The surface area of the object is about 560 cm^2.

PROBLEM

19. ANS:

a) Area of PQRS $= \frac{1}{4} \times$ area of ABCD

$= \frac{1}{4} \times 121 \text{ cm}^2$

$= 30.25 \text{ cm}^2$

b) PQ $= \sqrt{30.25}$ cm = 5.5 cm

20. ANS:

$AC^2 = AD^2 + DC^2$

$= 21.3^2 + 14.2^2$

$= 655.33$

$AC = \sqrt{655.33}$

$\doteq 25.6$

The length of AC is about 25.6 cm.

21. ANS:

0 faces: $(7-2)(7-2)(7-2) = 125$

1 face: $6 \times (7-2)(7-2) = 150$

2 faces: $12 \times (7-2) = 60$

3 faces: 8

22. ANS:

Edge length of each cube $= \sqrt[3]{64} = 4$

Surface area of the 2 cubes before the composite object is formed $= 2 \times (6 \times 4 \times 4) = 192$

Area of the 2 circular surfaces where the faces overlap $= 2 \times \pi \times \left(\frac{4}{2}\right)^2 \doteq 25.13$

Area of the curved surface of the cylinder $= \pi \times 4 \times 14 \doteq 175.93$

Total surface area $\doteq 192 - 25.13 + 175.93 \doteq 342.8$

The surface area of the composite object is about 343 cm^2.