

Math 9 Accelerated - Exam Review: Chapter 1 Answer Section

MULTIPLE CHOICE

1. B
2. D
3. C
4. A
5. C
6. D
7. B
8. A
9. C
10. D
11. A
12. B
13. D
14. D
15. D
16. A
17. D

SHORT ANSWER

1. $\frac{11}{13}$
2. $\frac{225}{256}$
3. 16, 0.16, 0.0016
4. Between 4 and 5
5. a) The length of one side of the garden is $\sqrt{306.25}$ m, or 17.5 m.
b) The perimeter of the garden is 4×17.5 m, or 70 m.
6. 144 and 169
 $\sqrt{144} = 12$
 $\sqrt{169} = 13$
7. Any decimal between 5.76 and 6.25
For example: 6.01 and 6.06
8. The length of side s is about 7.1 cm.
9. The surface area of the object is about 678 cm².

10. The surface area of the barn is about 936 m².

PROBLEM

1. Answers will vary. For example:

$$\sqrt{0.37} \doteq 0.61$$

$$\sqrt{0.61} \doteq 0.78$$

The 3 numbers would be:

$$0.76 \times 0.76 = 0.5776$$

$$0.74 \times 0.74 = 0.5476$$

$$0.72 \times 0.72 = 0.5184$$

2. Use the square root function on a calculator.

$$\sqrt{\frac{14.2}{3}} \doteq 2.2$$

$$\sqrt{\frac{13.1}{4}} \doteq 1.8$$

$$\sqrt{4.5} \doteq 2.1$$

$$\sqrt{3.7} \doteq 1.9$$

Since $1.8 < 1.9 < 2.1 < 2.2$, from least to greatest: $\sqrt{\frac{13.1}{4}}$, $\sqrt{3.7}$, $\sqrt{4.5}$, $\sqrt{\frac{14.2}{3}}$

3. Area of roof = $80 \times 70 + 60 \times 35 = 7700$
 Area of front = $80 \times 20 + 60 \times 10 - 15 \times 10 = 2050$
 Area of back = $80 \times 20 + 60 \times 10 = 2200$
 Area of left side = $70 \times 20 = 1400$
 Area of right side = $70 \times 20 = 1400$

So, the surface area of the warehouse building is: $7700 \text{ m}^2 + 2050 \text{ m}^2 + 2200 \text{ m}^2 + 2 \times 1400 \text{ m}^2 = 14750 \text{ m}^2$

4. Height of equilateral triangle = $\sqrt{14^2 - \left(\frac{14}{2}\right)^2} \doteq 12.12$

$$\text{Area of 4 equilateral triangles} = 4 \times \left(\frac{1}{2} \times 14 \times 12.12\right) = 339.36$$

$$\text{Area of the 6 rectangular sides} = 6 \times 14 \times 5 = 420$$

$$\text{Curved surface area of cylinder} = \pi \times 5 \times 9 \doteq 141$$

$$\text{Area of overlap} = 2 \times \pi \left(\frac{5}{2}\right)^2 \doteq 39.27$$

$$\text{Total surface area} \doteq 339.36 + 420 + 141 - 39.27 \doteq 861.46$$

The surface area of the object is about 861 cm².