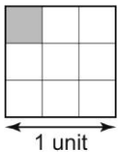
Mathematics **Name: _____**

Unit 1 review sheet

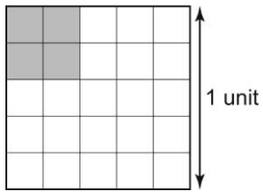
Complete the following in the space provided. <u>Show all workings.</u>

1. Use each diagram to determine the value of the square root.

a) $\sqrt{\frac{1}{9}}$



b) $\sqrt{0.16}$



2. Which numbers below are perfect squares? How do you know?

a) $\frac{25}{121}$ **b)** $\frac{2}{50}$ c) 0.004

3. Calculate the number whose square root is:

a) $\frac{5}{7}$ **b)** 1.6

4. Determine the value of each square root.

a) $\sqrt{\frac{225}{49}}$ **b)** $\sqrt{6.76}$ **c)** $\sqrt{0.0025}$

5. The area of a square garden is 12.25 m^2. (Use a diagram to help you.)

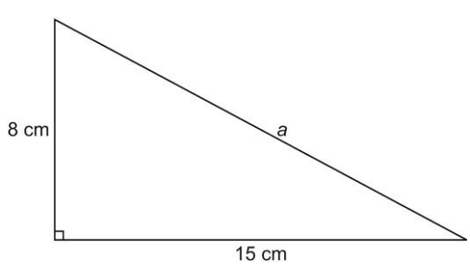
a) Determine the perimeter of the garden.
b) The owner decides to put a gravel pathway around the garden.
This reduces the area of the garden by 4.96 m^2.
What is the new side length of the garden?

6. Use benchmarks to approximate each square root to the nearest tenth.

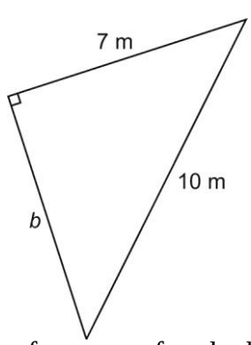
a) $\sqrt{11.6}$ **b)** $\sqrt{0.39}$

7. In each triangle, determine the unknown length to the nearest tenth of a unit where necessary.

a)

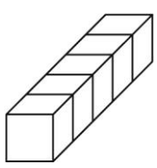


b)

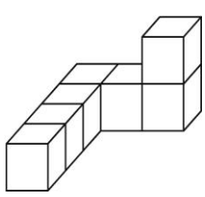


8. Each cube has edge length 1 unit. Determine the surface area of each object.

a)



b)



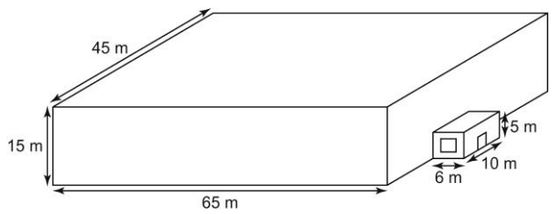
9. Estimate $\sqrt{\frac{38}{7}}$. Do not use a calculator. Explain the strategy you used.

10. The local curling rink is shown in the diagram at the right. It is to be painted.

a) Determine the surface area of the structure.

b) The roof, windows, and door are not to be painted. The door is 1 m by 2 m and the window is 4 m by 2 m. Determine the surface area to be painted.

c) A can of paint covers 300 m2 and costs $45. Determine the cost of the paint needed.



11. Determine the surface area of this composite object to the nearest tenth of a square centimetre. The diameter of the cylinder is 6 cm.