Grade Eight Review for Final – Unit 4
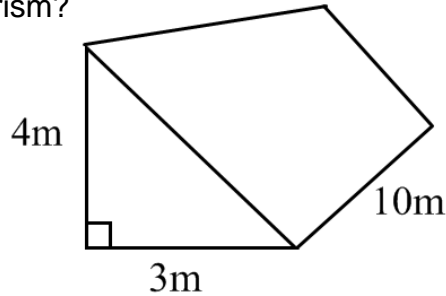
<u>Multiple Choice Section</u>
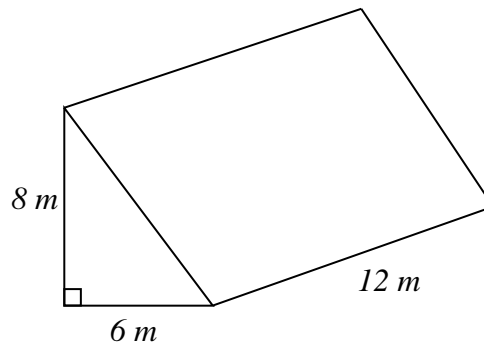
1. What is the volume of this prism?

   A) 60 m^3
   B) 60 m^2
   C) 120 m^3
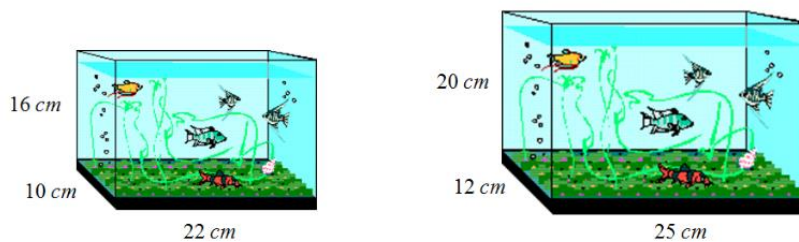   D) 120 m^2

   4m

   3m

   10m

2. Find the volume.

   A) 288 m^3

   B) 480 m^3

   C) 576 m^3

   D) 720 m^3

   8 m

   6 m

   12 m

3. Seth wants to move his goldfish into a larger tank. The tanks are pictured below.

   16 cm

   10 cm

   22 cm

   20 cm

   12 cm

   25 cm

   Assuming both tanks are filled to the top how many more ml of water will the new tank hold compared to the old tank?

   A) 2480 ml B) 3520 ml
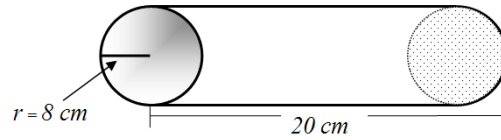
   C) 6000 ml D) 9520 ml

4. Determine the total surface area of the cylinder.

A) 1004.8 cm^2

B) 1205.8 cm^2

C) 1406.7 cm^2

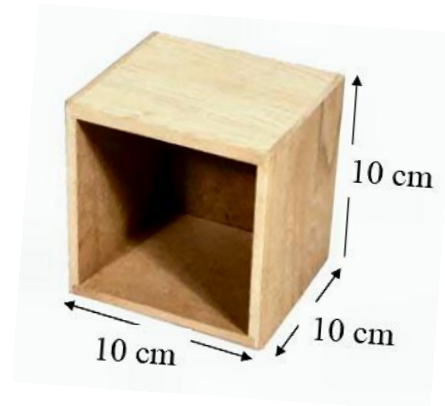D) 4019.2 cm^2

$r = 8$ cm

20 cm

5. This wooden shadow box, with no front, has the dimensions indicated (10 cm on each edge). How many square centimeters of decorative paper are needed to cover _the 5 outer sides_ of this box?

A) 150

B) 500

C) 600

D) 1000

10 cm

10 cm

10 cm

6. A contractor needs to fill a cylindrical hole in the ground. If he knows the depth and the width of the hole, what formula would he use to calculate the amount of fill that he needs?

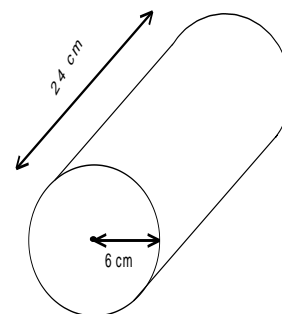A) πr^2 B) $2\pi rh$ C) $\pi r^2 h$ D) $2\pi r^2 + 2\pi rh$

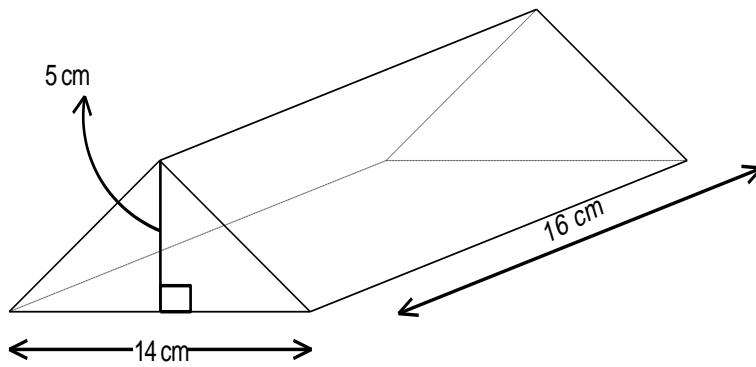7. What is the total surface area of this cylinder?

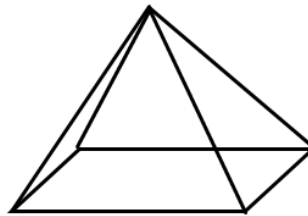(A) 904.32 cm²

(B) 942.0 cm²

(C) 1130.4 cm²

(D) 2712.96 cm²

24 cm

6 cm

8. What is the volume of this prism?

5 cm

16 cm

14 cm
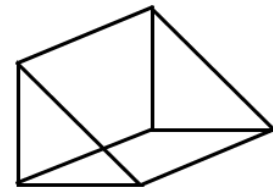
(A) 224 cm³

(B) 560 cm³
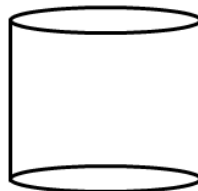
(C) 1120 cm³

(D) 2240 cm³

LONG ANSWER SECTION

9. Draw nets for the following objects and tell how many triangles, rectangles and squares the nets have.
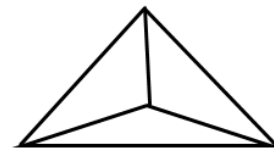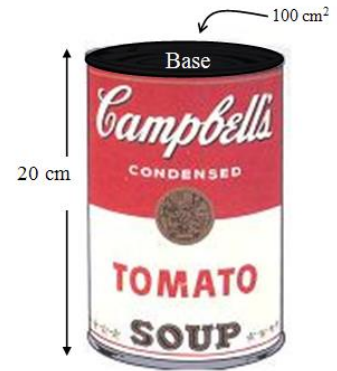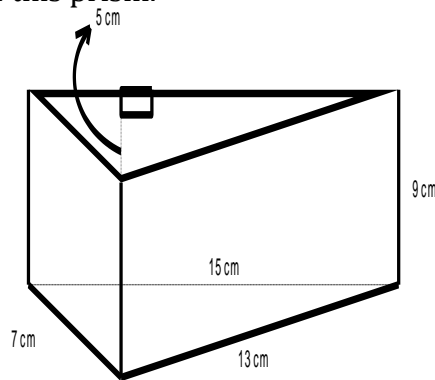
Square Pyramid

Triangular Prism

Cylinder

Tetrahedron

10. An oversized soup can has a height of 20 cm. The *area of the base* is 100 cm^2.

What is the volume of the can, measured in cm^3?

100 cm^2

Base

20 cm

11. Determine the surface area of this prism.

5 cm

9 cm

15 cm

7 cm

13 cm

12. The hollow glass tubing used in science labs comes in different sizes. A common size has an outer diameter of 8 mm and an inner diameter of 5.8 mm. What is the volume of glass in a 120 mm length of this tubing?

120 mm

5.8 mm

8 mm