Name : KEY

Developing/Proficient

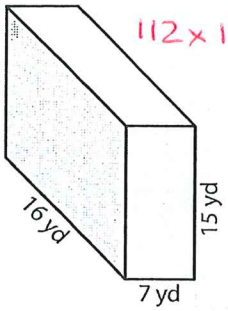
Volume - Rectangular Prism

ES2

A) Find the volume of each rectangular prism.

1) $7 \times 16 = 112$ yd

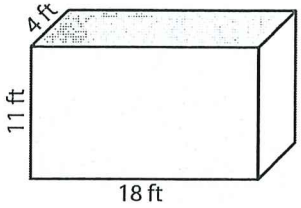
$112 \times 15 = 1680$



Volume = $1680\ yd^3$

2) $18 \times 4 = 72$

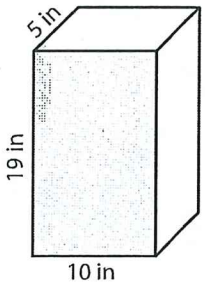
$72 \times 11 = 792$



Volume = $792\ ft^3$

3) $10 \times 5 = 50$

$50 \times 19 = 950$



Volume = $950\ in^3$

B) Find the volume of each rectangular prism from the given parameters.

4) width = 4 ft ; height = 15 ft ; length = 8 ft

$4 \times 15 \times 8$

Volume = $480\ ft^3$

5) length = 18 yd ; height = 6 yd ; width = 7 yd

$18 \times 6 \times 7$

Volume = $756\ yd^3$

6) length = 12 in ; width = 3 in ; height = 7 in

$12 \times 3 \times 7$

Volume = $252\ in^3$

7) height = 14 ft ; width = 5 ft ; length = 9 ft

$14 \times 5 \times 9$

Volume = $630\ ft^3$

8) Find the volume of a rectangular prism whose length, width and height are 20 yards, 17 yards and 13 yards respectively.

$20 \times 17 \times 13$

$4420\ yd^2$

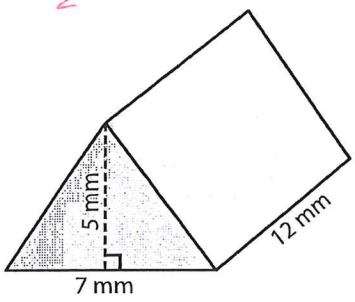
Name : _____

Volume - Triangular Prism

ES1

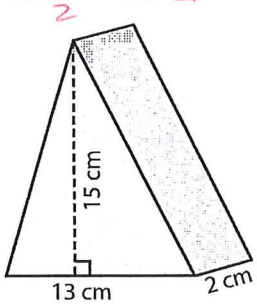
Find the volume of each triangular prism.

1) $\frac{7 \times 5}{2} \times 12$



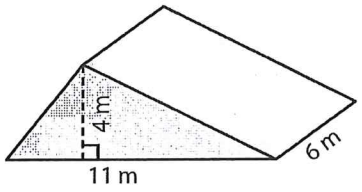
Volume = $210\ mm^3$

2) $\frac{13 \times 15}{2} \times 2$



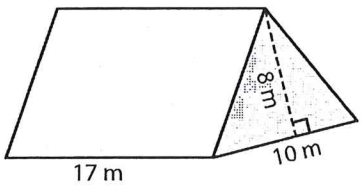
Volume = $195\ cm^3$

3) $\frac{11 \times 4}{2} \times 6$



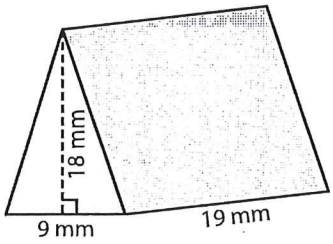
Volume = $132\ m^3$

4) $\frac{10 \times 8}{2} \times 17$



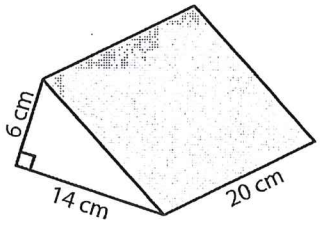
Volume = $680\ m^3$

5) $\frac{9 \times 18}{2} \times 19$



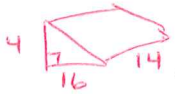
Volume = $1539\ mm^3$

6) $\frac{14 \times 6}{2} \times 20$



Volume = $840\ cm^3$

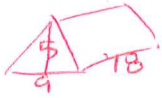
7) The base of a prism is a right triangle with legs measuring 16 cm and 4 cm. If the height of the prism is 14 cm, find its volume.



$\frac{4 \times 16}{2} \times 14$

$448\ cm^3$

8) The base of a prism is a triangle with a base of 9 mm and a height of 5 mm. Determine the volume if its length is 18 mm.



$\frac{5 \times 9}{2} \times 18$

$405\ mm^3$

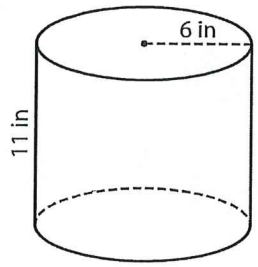
Name : _____

Volume - Cylinder

Integers: ES1

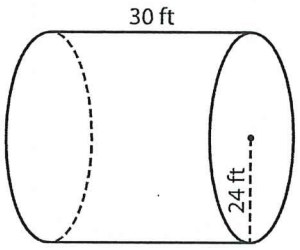
A) Find the volume of each cylinder. (use $\pi = 3.14$)

1) $\pi \times 6^2 \times 11$



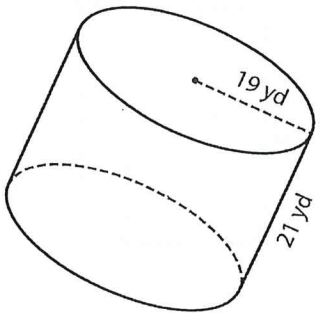
Volume = 1243.44 in^3

2) $\pi \times 24^2 \times 30$



Volume = 54 259.2 ft^3

3) $\pi \times 19^2 \times 21$



Volume = 23804.34 yd^3

B) Find the volume of each cylinder from the given parameters. (use $\pi = 3.14$)

4) height = 9 ft ; radius = 3 ft

$\pi \times 3^2 \times 9$

Volume = 254.34 ft^3

5) radius = 13 yd ; height = 8 yd

$\pi \times 13^2 \times 8$

Volume = 4 245.28 yd^3

6) radius = 16 in ; height = 27 in

$\pi \times 16^2 \times 27$

Volume = 21 703.68 in^3

7) height = 15 ft ; radius = 10 ft

$\pi \times 10^2 \times 15$

Volume = 4710 ft^3

8) A cylindrical flower vase is 11-inch tall. Find the volume of the vase if the radius is 4 inches. (use $\pi = 3.14$)

$\pi \times 4^2 \times 11$

552.64 in^3

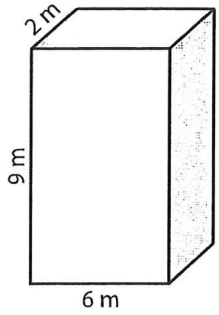
Name : _____

Volume - Prisms and Cylinders

Integers: L1S1

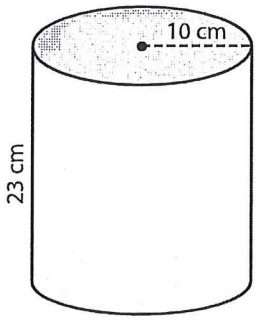
Find the volume of each shape. (use $\pi = 3.14$)

1) $6 \times 2 \times 9$



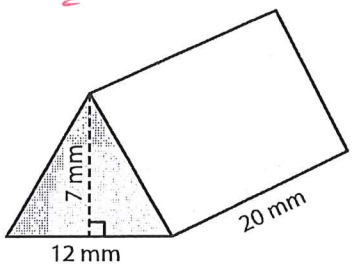
Volume = $108\ m^3$

2) $\pi \times 10^2 \times 23$



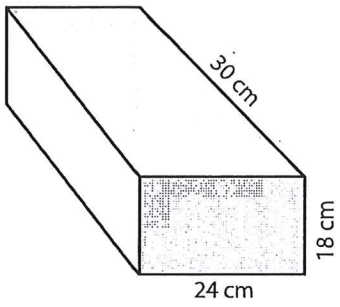
Volume = $7222\ cm^3$

3) $\frac{12 \times 7}{2} \times 20$



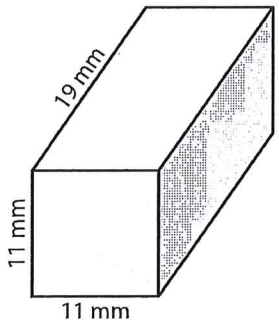
Volume = $840\ mm^3$

4) $24 \times 18 \times 30$



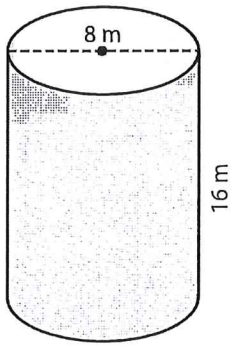
Volume = $12960\ cm^3$

5) $11 \times 19 \times 11$



Volume = $2299\ mm^3$

6) $\pi \times 4^2 \times 16$



Volume = $803.84\ m^3$

7) The radius and height of a cylinder are 21 m and 5 m respectively. What is the volume of the cylinder? (use $\pi = 3.14$)

$\pi \times 21^2 \times 5$

$6923.7\ m^3$

8) The base of a prism is a right triangle with legs measuring 3 cm and 4 cm. If the height of the prism is 13 cm, determine its volume.

$\frac{3 \times 4}{2} \times 13$

$78\ cm^3$

Name : KEY Extending

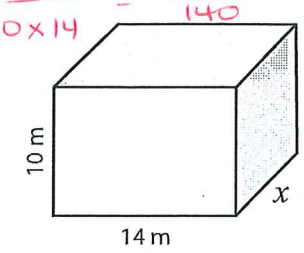
Volume - Rectangular Prism

Sheet 3

A) Find the value of x.

1) Volume = 1,260 m^3

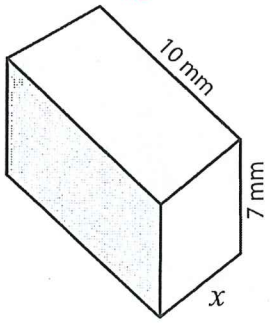
1260 / 10×14 = 1260 / 140



x = 9 m

2) Volume = 350 mm^3

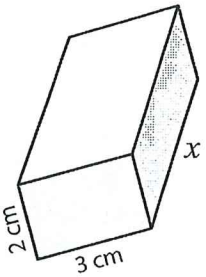
70



x = 5 mm

3) Volume = 24 cm^3

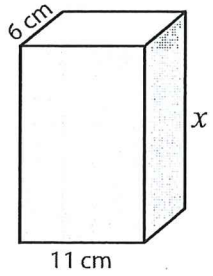
6



x = 4 cm

4) Volume = 1,188 cm^3

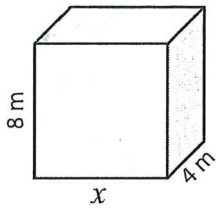
66



x = 18 cm

5) Volume = 256 m^3

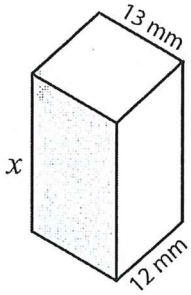
32



x = 8 m

6) Volume = 3,120 mm^3

12×13



x = 20 mm

7) The width and height of a rectangular prism are 8 m and 15 m respectively. Find the length of the rectangular prism whose volume is 2,040 m^3.

2040 / 8×15

17m

8) A rectangular prism has a length of 16 mm and a height of 7 mm. If the volume of the rectangular prism is 1,120 mm^3, find its width.

1120 / 16×7

10 mm

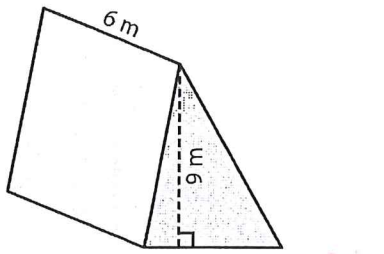
Name : _____

Volume - Triangular Prism

Sheet 1

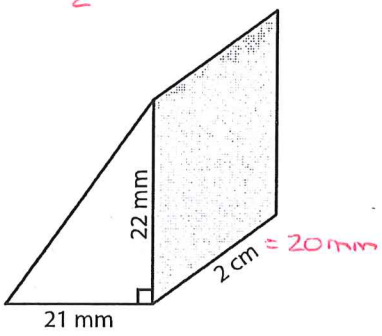
Find the volume of each triangular prism.

1) $\frac{0.3 \times 9}{2} \times 6$



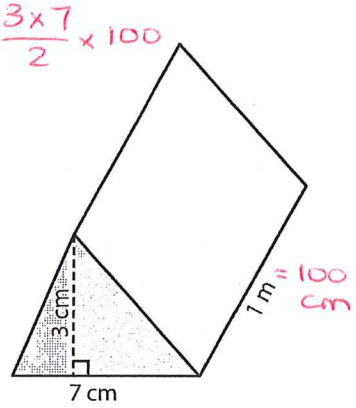
Volume = 8.1 m^3

2) $\frac{21 \times 22}{2} \times 20$



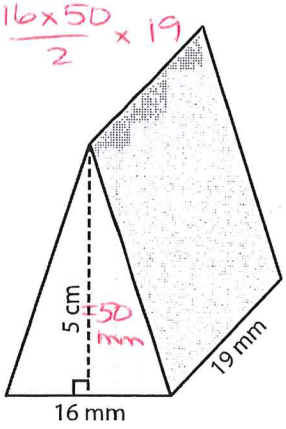
Volume = 4620 mm^3

3) $\frac{3 \times 7}{2} \times 100$



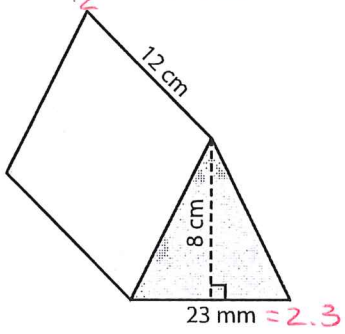
Volume = 1050 cm^3

4) $\frac{16 \times 50}{2} \times 19$



Volume = 7600 mm^3

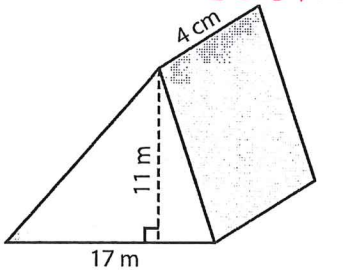
5) $\frac{2.3 \times 8}{2} \times 12$



Volume = 110.4 cm^3

6) $\frac{17 \times 11}{2} \times 0.04$

= 0.04 m



Volume = 3.74 m^3

7) The base of a prism is a right triangle with legs measuring 15 mm and 18 m. If the height of the prism is 20 m, find its volume in m^3.

↳ 0.015 m

$\frac{0.015 \times 18}{2} \times 20$

2.7 m^3

8) The base of a prism is a triangle with a base of 13 mm and a height of 25 mm. Determine the volume in mm^3 if its length is 3 cm.

↳ 30 mm

$\frac{13 \times 25}{2} \times 30$

4875 mm^3

Name : _____

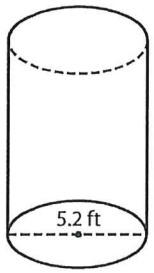
Volume - Cylinder

L2S1

A) Find the indicated measure. Round your answer to the nearest tenth. (use $\pi = 3.14$)

1) Volume = 157 ft^3

$\pi \times 2.6^2$



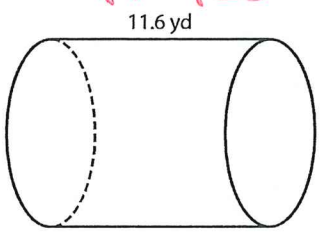
$r = 2.6$

height = 7.4 ft

2) Volume = 910.6 yd^3

$\pi \times 11.6$

$\sqrt{r^2} = \sqrt{25}$



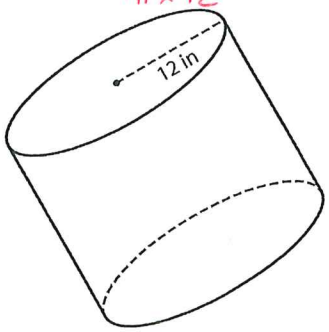
$r = 5$

$d = 5 \times 2$

diameter = 10 yd

3) Volume = 9820.58 in^3

$\pi \times 12^2$



height = 21.7 in

B) Find the indicated measure. Round your answer to the nearest tenth. (use $\pi = 3.14$)

4) Volume = 41,436 ft^3 ; radius = 22.5 ft

$\pi \times 22.5^2$

height = 586.5 ft

5) Volume = 68.13 yd^3 ; height = 2.4 yd

$\pi \times 2.4$

$\sqrt{r^2} = \sqrt{9}$

radius = 3 yd

6) Volume = 5,126.62 in^3 ; height = 17 in

$\pi \times 17$

$\sqrt{r^2} = \sqrt{96}$

$r = 9.8$

diameter = 19.6 in

7) Volume = 8,011.96 ft^3 ; diameter = 30.2 ft

$\pi \times 15.1^2$

$\frac{30.2}{2} = 15.1$

height = 11.2 ft

8) A cylindrical oil pipe measures 4 feet in diameter and 251.2 cubic feet in volume. What is the height of the oil pipe? Round your answer to the nearest tenth. (use $\pi = 3.14$)

$r = 2$ $V = 251.2$ $h = \frac{251.2}{\pi \times 2^2}$

$h = 20$ ft

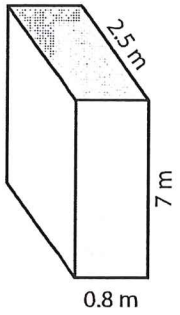
Name : _____

Volume - Prisms and Cylinders

Decimals: L1S1

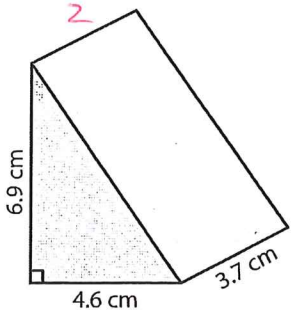
Find the volume of each shape. Round your answer to two decimal places. (use $\pi = 3.14$)

1) $0.8 \times 7 \times 2.5$



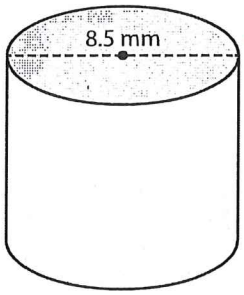
Volume = $14\ m^3$

2) $\frac{4.6 \times 6.9 \times 3.7}{2}$



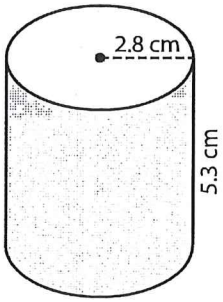
Volume = $58.72\ cm^3$

3) $\pi \times 4.25^2 \times 6.4$



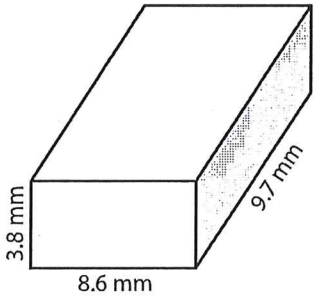
Volume = $362.98\ mm^3$

4) $\pi \times 2.8^2 \times 5.3$



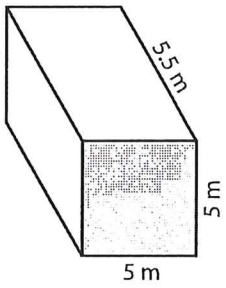
Volume = $130.47\ cm^3$

5) $8.6 \times 9.7 \times 3.8$



Volume = $317.00\ mm^3$

6) $5 \times 5.5 \times 5$



Volume = $137.5\ m^3$

7) The base of a prism is a triangle with a base of 9.1 cm and a height of 7.1 cm. If the height of the prism is 1.3 cm, find its volume. Round your answer to two decimal places.

$\frac{9.1 \times 7.1}{2} \times 1.3$

$42.00\ cm^3$

8) The diameter of a cylinder is 4.2 mm. If the height of the cylinder is 2.9 mm, determine its volume. Round your answer to two decimal places. (use $\pi = 3.14$)

$r = 4.2 \div 2 = 2.1$ $\quad \pi \times 2.1^2 \times 2.9$

$40.16\ mm^3$