

Curriculum Outcome

(N5) Determine the square root of positive rational numbers that are perfect squares.

(N6) Determine an approximate square root of positive rational numbers that are non-perfect squares.

(SS2) Determine the surface area of composite 3-D objects to solve problems

(N4) **Explain and apply the order of operations, including exponents, with and without technology.**

Quiz Day

Hypotenuse

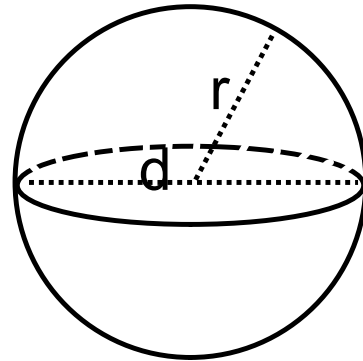
$$c^2 = a^2 + b^2$$

Leg

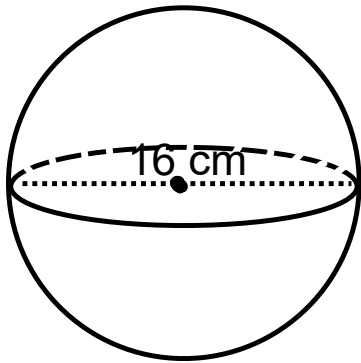
$$a^2 = c^2 - b^2$$

Surface Area of a Sphere

$$A = 4 \pi r^2$$



Example



$$r = 8 \text{ cm}$$

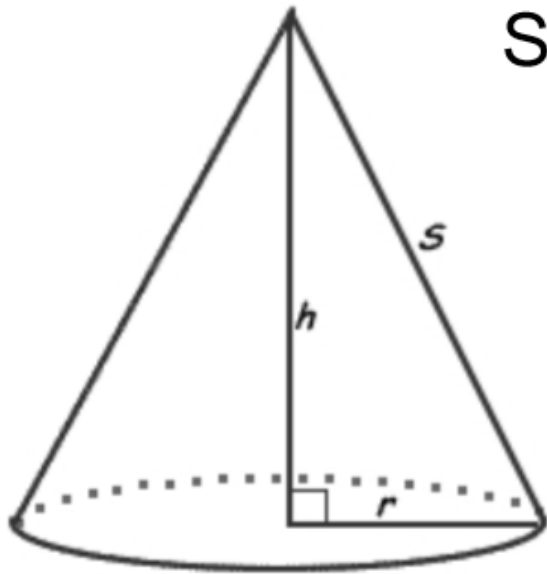
$$A = 4 \pi r^2$$

$$A = 4 (3.14) (8)^2$$

$$A = 4 (3.14) (64)$$

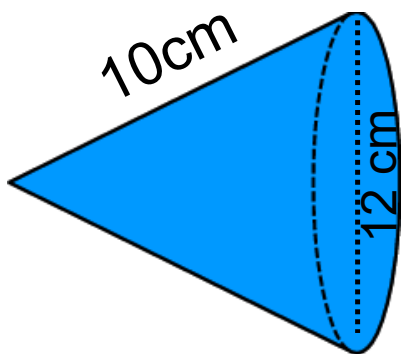
$$A = 803.84 \text{ cm}^2$$

Surface Area of a Cone



$$SA = \pi r^2 + \pi r s$$

Example:



$$r = 12$$

$$s = 10$$

$$SA = \pi r^2 + \pi r s$$

$$SA = (3.14)(6)^2 + (3.14)(6)(10)$$

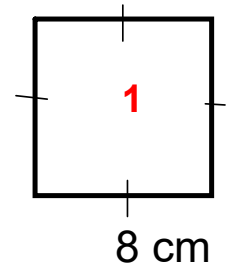
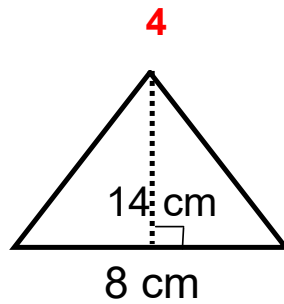
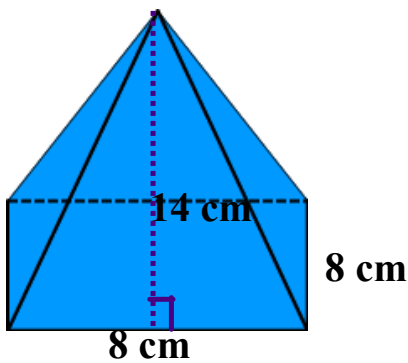
$$SA = (3.14)(36) + (3.14)(6)(10)$$

$$SA = 113.04 + 188.4$$

$$SA = 301.44 \text{ cm}^2$$

What is the surface area of the following shape?

Square Pyramid



$$A = \frac{b \times h}{2}$$

$$A = \frac{8 \times 14}{2}$$

$$A = 56 \text{ cm}^2$$

$$4A = 224 \text{ cm}^2$$

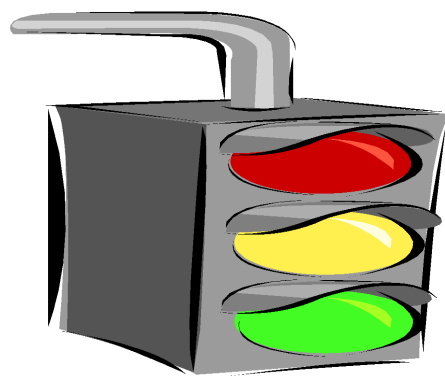
$$A = b^2$$

$$A = 8^2$$

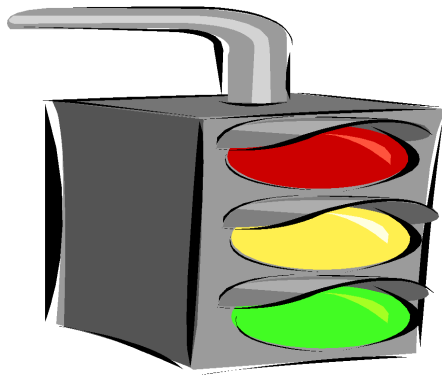
$$A = 64 \text{ cm}^2$$

$$Tsa = 224 + 64$$

$$= 288 \text{ cm}^2$$



Now it is
time for
Home
Learning



Worksheet: Surface Area of Mixed Shapes

Questions 1 to 9

-show all work (formulas and sketches)