Ch 1: Perfect Squares & Surface Area

Perfect Squares

$(1)^2 = 1 \times 1 = 1$

$(2)^2 = 2 \times 2 = 4$

$(3)^2 = 3 \times 3 = 9$

$(4)^2 = 4 \times 4 = 16$

$(5)^2 = 5 \times 5 = 25$

$(6)^2 = 6 \times 6 = 36$

$(7)^2 = 7 \times 7 = 49$

$(8)^2 = 8 \times 8 = 64$

$(9)^2 = 9 \times 9 = 81$

$(10)^2 = 10 \times 10 = 100$

$(11)^2 = 11 \times 11 = 121$

$(12)^2 = 12 \times 12 = 144$

$(13)^2 = 13 \times 13 = 169$

$(14)^2 = 14 \times 14 = 196$

$(15)^2 = 15 \times 15 = 225$

$(16)^2 = 16 \times 16 = 256$

$(17)^2 = 17 \times 17 = 289$

$(18)^2 = 18 \times 18 = 324$

$(19)^2 = 19 \times 19 = 361$

$(20)^2 = 20 \times 20 = 400$

$(21)^2 = 21 \times 21 = 441$

$(22)^2 = 22 \times 22 = 484$

$(23)^2 = 23x\ 23 = 529$

$(24)^2 = 24 \times 24 = 576$

$(25)^2 = 25 \times 25 = 625$

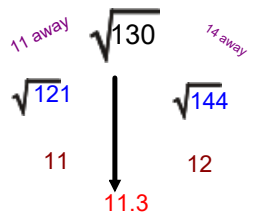
The square root of a number is 25, what is the number

$\sqrt{x} = 25$

$x = (25)^2$

$x = 625$

Bench Marks

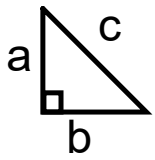


To determine if a decimal is a perfect square

With a calculator - take the square root and if it is a decimal that ends or repeats then it is a perfect square

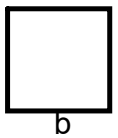
With a calculator - change the decimal to a fraction and then see if you can take the square root of the top and the bottom

Pythagorean theorem



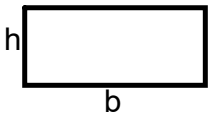
Hypothesis $c^2 = a^2 + b^2$

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

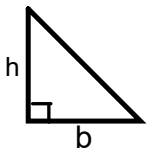


Area = b^2

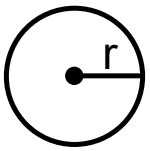
base = $\sqrt{\text{Area}}$



Area = b x h



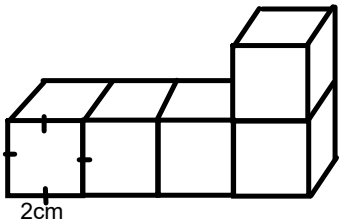
Area = $\frac{b \times h}{2}$



Area = πr^2

$C = 2\pi r$

Permetre is the adding up of all sides



Area of one face

$A = b^2$

$A = 2^2$

$A = 4cm^2$

5 cubes x 6 faces = 30 faces

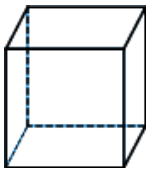
- 8 overlap faces

22 visible faces

x $4cm^2$

$88cm^2$

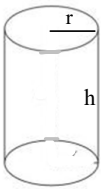
Surface Area Cube



SA = 6 x (Area of one face)

SA = 6 x (b^2)

Surface Area Cylinder

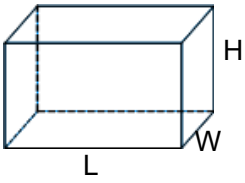


circles rectangle

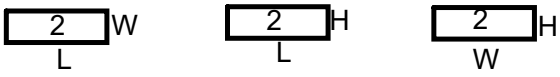
Area of Cylinder = $2\pi r^2 + 2\pi rh$

= 2(3.14) (___)^2 + 2(3.14) (___) (___)

Surface Area Rectangular Prism

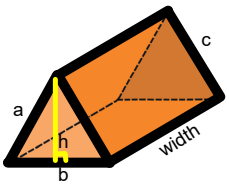


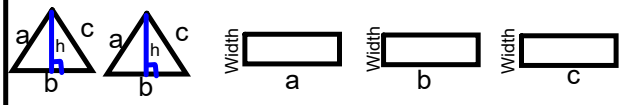
L , W , H



SA= 2(LxW) + 2(LxH) + 2(WxH)

Surface Area Triangular Prism





SA= 2 $\frac{(b \times h)}{2}$ + (a x width) + (b x width) + (c x width)

1 overlap = 2 faces disappear

Surface Area of Composite Shapes

SA of Big + SA of Small - Overlap area

Surface Area of Warehouse

SA of Big + SA of Small - Overlap areas- floors - windows - doors