

6.1- A- Areas of Prisms and Cylinders

For every solid we can find two types of areas:

- Lateral area (A_L): area of lateral faces-no base(s)
- Total area (A_T): area of lateral faces and base(s)

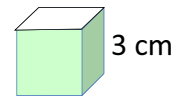
Formulas:

	A_L (Lateral Area)	$A_T = A_L + 2A_b$ (Total Area)
Cubes	$4w^2$	$6w^2$
Prisms	$P_b h$	$P_b h + 2A_b$
Cylinders	$2\pi r h$ or $\pi d h$	$2\pi r h + 2\pi r^2$

1

	A_L (Lateral Area)	$A_T = A_L + 2A_b$ (Area total)
Cubes	$4w^2$	$6w^2$

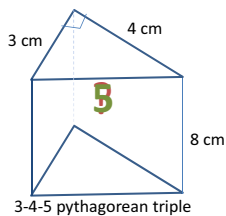
Ex 1: Find the total area



2

	A_L (Lateral Area)	$A_T = A_L + 2A_b$ (Area total)
Prisms	$P_b h$	$P_b h + 2A_b$

Ex 2: Page 178 # 4)

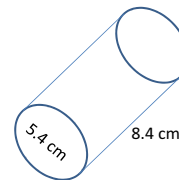


$$A_T = P_b h + 2A_b$$

3

	A_L (Lateral Area)	$A_T = A_L + 2A_b$ (Area total)
Cylinders	$2\pi r h$ or $\pi d h$	$2\pi r h + 2\pi r^2$

Ex 3: P.181 # 14b)



If $d = 5.4$ cm
Then $r = 2.7$ cm

4

Practice: page 178 # 5,8,9,10
page 181 # 14

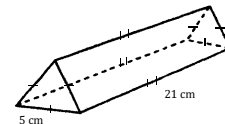


5

	A_L (Lateral Area)	$A_T = A_L + 2A_b$ (Area total)
Prisms	$P_b h$	$P_b h + 2A_b$

Ex 4: Find the total surface area of this prism

$$A_T = P_b h + 2A_b$$

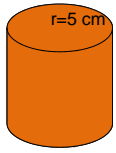


6

6

	A_L (Lateral Area)	$A_T = A_L + 2A_b$ (Area total)
Cylinders	$2\pi rh$ or πdh	$2\pi rh + 2\pi r^2$

Ex 5: Find the total surface area of the cylinder



$$A_T = 2\pi rh + 2\pi r^2$$

Do and Hand in:
page 179 # 11,13
page 181 # 15,16,17

