What's Going On?

Checking In

Minds on   Surface Area Formulas

Action!   Surface Area Formulas Revisited

Consolidation Surface Area 2.0

Learning Goal - I will be able to calculate the surface area of geomeric solids and composite figures.
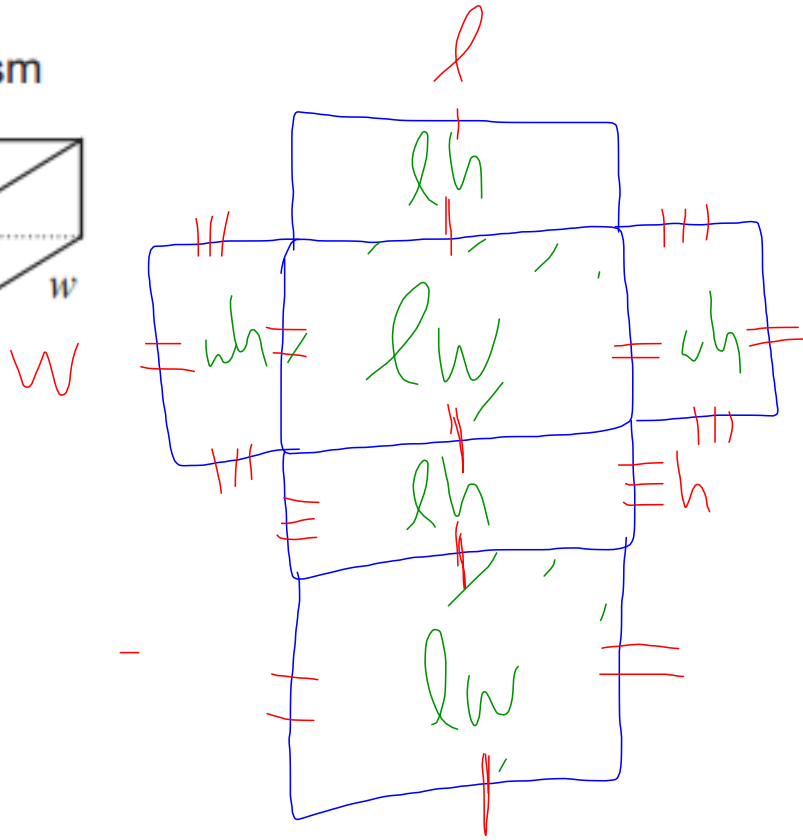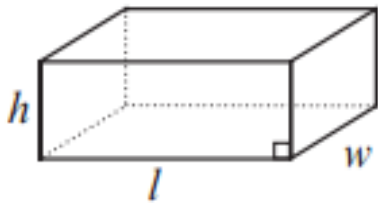
Checking In

Questions?

Minds on

Surface Area Formulas

Rectangular prism
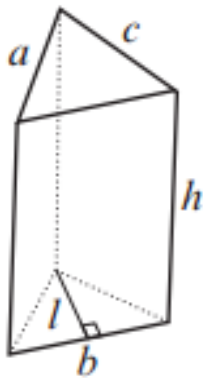

$$SA = lh + lh + lw + lw + wh + wh$$

$$= 2lh + 2lw + 2wh$$

$$= 2(lh + lw + wh)$$

Minds on

Surface Area Formulas

Triangular prism

$$h(a+b+c)$$

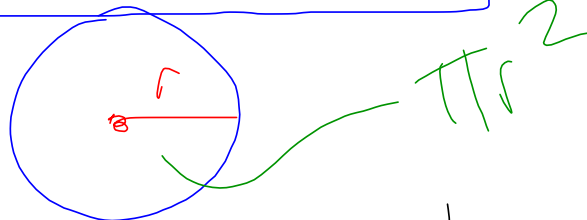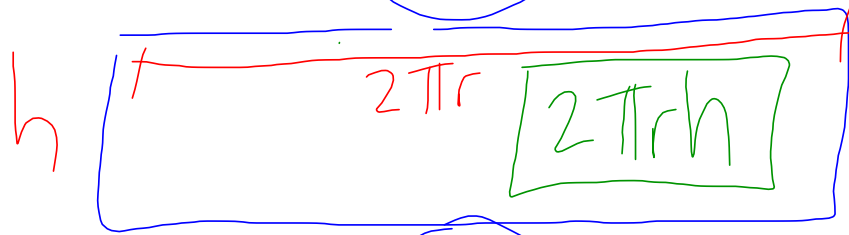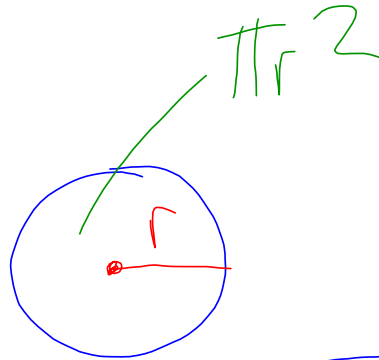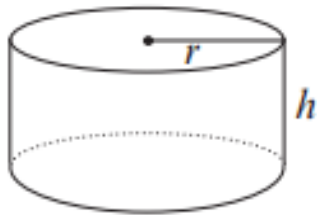$$ah + bh + ch$$

$$+ \frac{bl}{2} + \frac{bl}{2}$$

$$bl$$

$$SA = bl + h(a+b+c)$$

Minds on

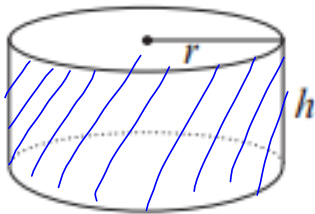# Surface Area Formulas

Cylinder

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

$$SA = 2\pi r^2 + 2\pi rh$$
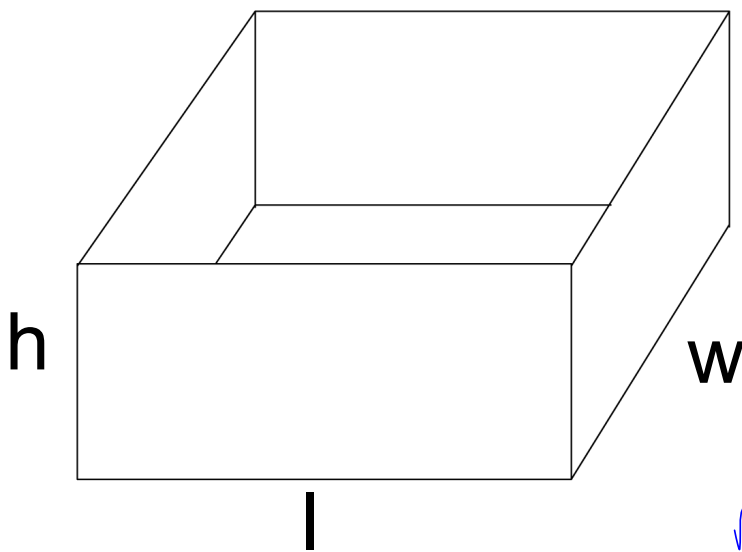
Minds on

Surface Area Formulas

Cylinder

$$2\pi r$$

$$A = 2\pi r h$$

lateral face - surface of a three-dimensional object that is not a base.

Action!

Surface Area Formulas Revisited

h

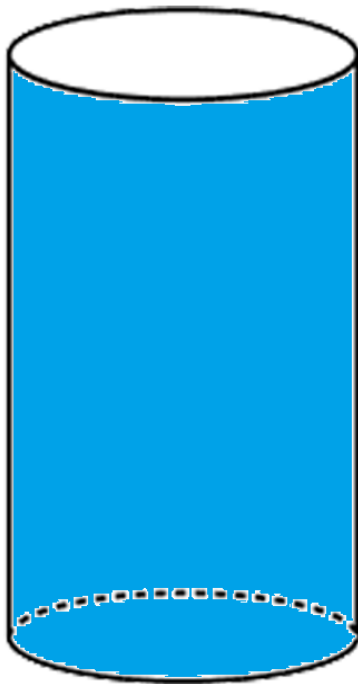w

l

What is the
surface area of
this box?

missing lw

$$SA = 2(lw + lh + bh) - lw$$

$$= 2(lh + bh) + lw$$

❙ Action!
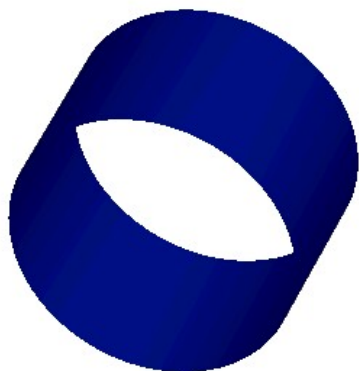
Surface Area Formulas Revisited

What is the surface area of this cylinder? (no top)

$$SA = \cancel{2\pi r^2} + 2\pi r h$$

Action!

Surface Area Formulas Revisited

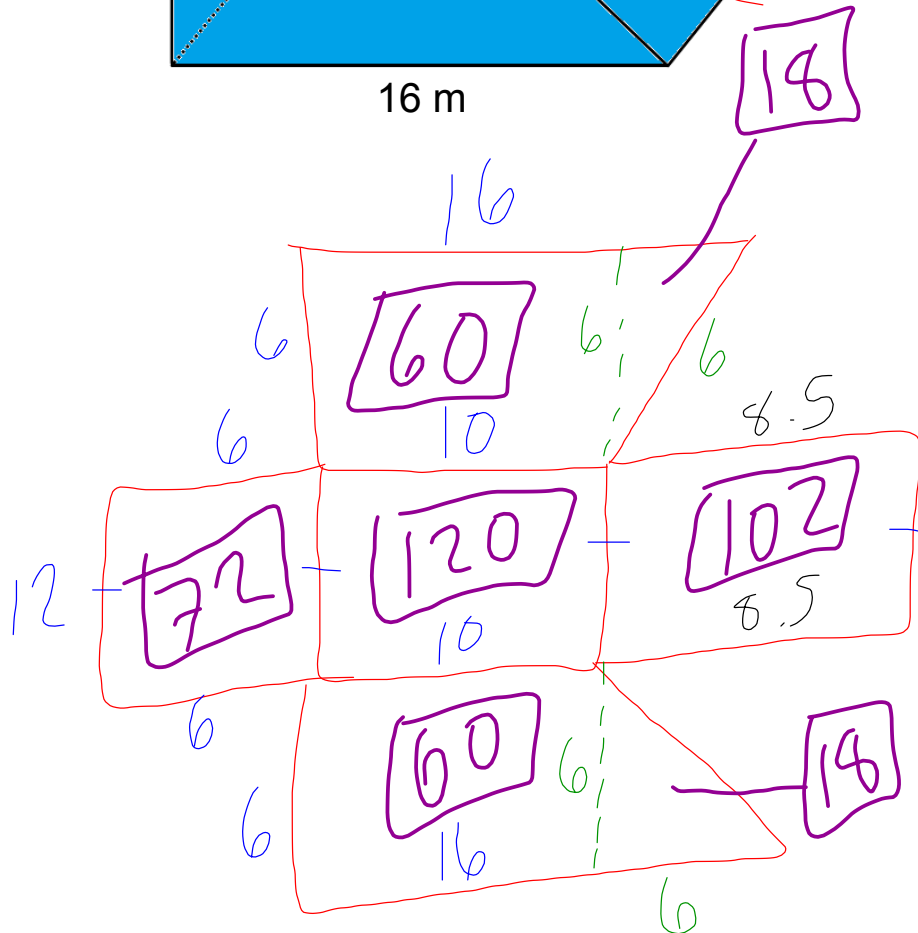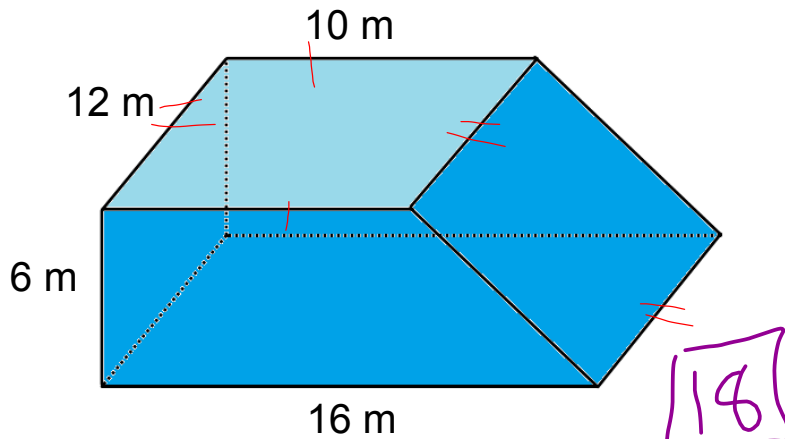What is the surface area of this cylinder? (no top or bottom!)

$$SA = 2\pi r^2 \boxed{+ 2\pi r h}$$

Consolidation

Surface Area 2.0

The outside of the object below is going to be painted. Determine the surface area to be painted. Do not include the bottom.

Start by sketching a net diagram including all of the surfaces that will be painted.

10 m

12 m

6 m

16 m

18

16

6

60

10

6 : 6

8.5

12 — 72 — 120 — 102 —

6

10

8.5

60

6 :

18

16

6

Add 'em up. 450 m²

Consolidation

Homework

Pg. 32 - 35

3, 5 - 9, 11 - 13

*Want a challenge? Try **any** of the extend problems.

Today: #14 looks good!