Target 12.1: Find and apply the surface area of solids.

1. Find the surface area of the cylinder.

$r = 12$ in.; $h = 18$ in.

Base is _____

B_A =_____

P_B = _____
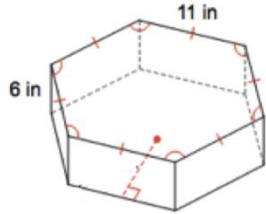
Need h or l?

h/l = _____

SA = _____

2. Find the surface area of the prism.

11 in

6 in

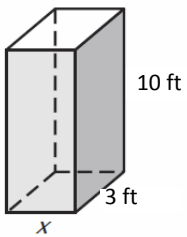Base is _____

B_A =_____

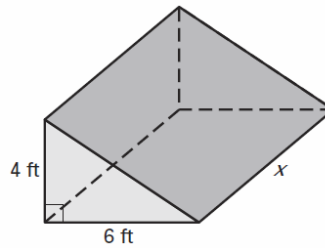P_B = _____

Need h or l?

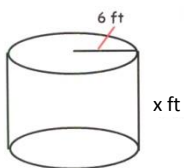h/l = _____

SA = _____

3. Find the value of x.

S = 112 ft²

10 ft

3 ft

x

4. Find the value of x.

$S = 200$ ft²

4 ft

6 ft

x

5. Find the value of the height.

S = 180π m²

6 ft

x ft

6. Find the surface area of the square pyramid.

32 feet

25 feet

25 feet
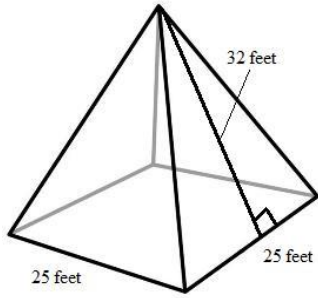
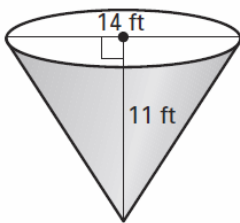Base is _____

B_A = _____

P_B = _____

Need h or l?

h/l = _____

SA = _____

7. Find the surface area of the cone.

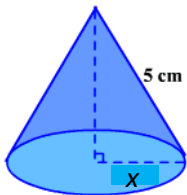14 ft

11 ft

Base is _____

B_A = _____

P_B = _____

Need h or l?

h/l = _____

SA = _____

8. Find the value of x.
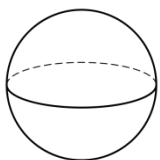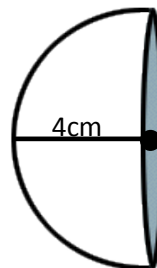
$S= 36\pi$ cm²

5 cm

x

Target 12.2: Find and apply the surface area of spheres and composite solids.
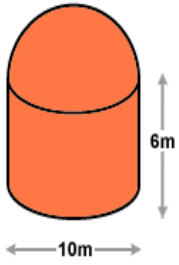
9. Find the value of the diameter.

$S= 900\pi$ ft²

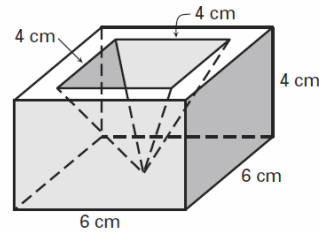10. Find the surface area of the hemisphere.

4cm

11. Find surface area of the silo built.

6m

10m

12. Find surface area of the composite solid.

4 cm
4 cm
4 cm
6 cm
6 cm

Target 5.3: Find and apply the volume of solids

13. Find the volume of the cylinder.

$r = 12$ in.; $h = 18$ in.

Base is_____

B_A =_____

h = _____

V = _____

14. Find the volume of the prism.

5 cm
5 cm
5.8 cm
6.3 cm
8 cm

Base is_____

B_A =_____

h = _____

V = _____

15. Find the height of cylinder with a volume of 192π in³ and a radius that is one third of the height.	16. A square pyramid has a volume of 1152 in³ and the height is twice as long as a base edge. Find the height of the pyramid.

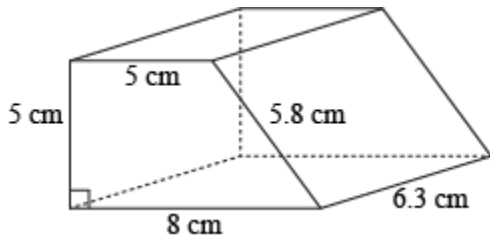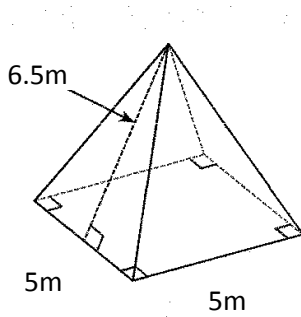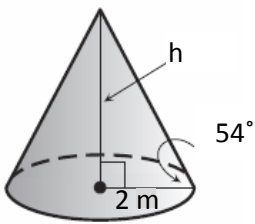17. Find the volume of the square pyramid.

6.5m

5m

5m

Base is_____

B_A =_____

h = _____

V = _____

18. Find the volume of the cone.

h

54°

2 m

Base is_____

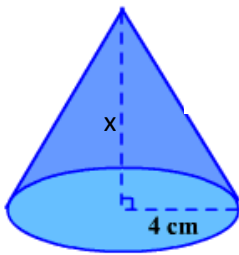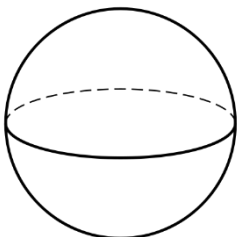B_A =_____

h = _____

V = _____

19. Find the value of x.

V = 108π cm³

x

4 cm
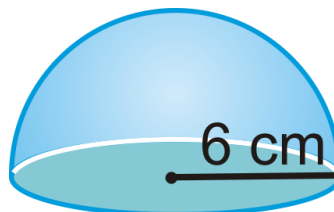
Target 5.4: Find and apply the volume of spheres and composite solids.
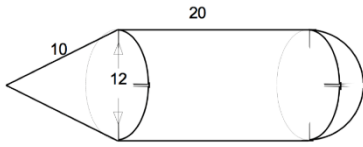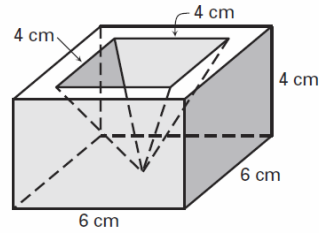
20. Find the value of the diameter.
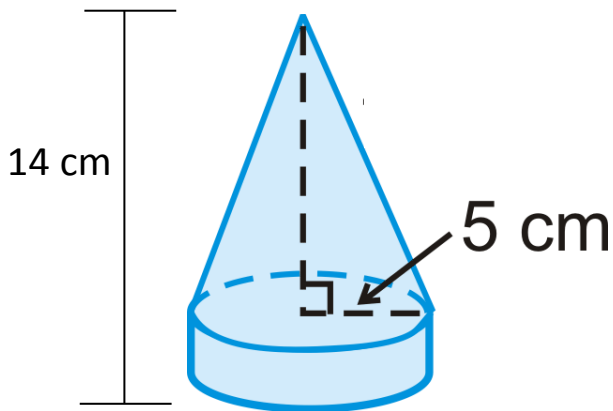
V = 36π ft³

21. Find the volume of the hemisphere.

6 cm

22. A firework is built using the dimensions below. Find the volume.

20
10
12

23. Find the volume of the composite solid.

4 cm
4 cm
4 cm
6 cm
6 cm

24. The height of the cylinder is one-sixth the height of the cone. Find the volume of the composite solid.

14 cm

5 cm

1) $720\pi \approx 2261.95 \ in^2$ 2) $363\sqrt{3} + 396 \approx 1024.73 \ cm^2$ 3) $2 \ ft$ 4) $\approx 10.23 \ ft$ 5) $9 \ ft$ 6) $2225 \ ft^2$

7) $49\pi + 7\pi\sqrt{170} \approx 440.67 \ ft^2$ 8) x = 4 cm   9) d = 30 ft   10) $48\pi \approx 150.8 \ cm^2$ 11) $110\pi \approx 345.58 \ m^2$

12) $16\sqrt{5} + 152 \approx 187.78 \ cm^2$ 13) $2592\pi \approx 8143.01 \ in^3$ 14) $204.75 \ cm^3$ 15) $h = 12 \ in$ 16) h = 24 in

17) $50m^3$ 18) $\approx 3.67\pi \approx 11.53 \ m^3$ 19)x = 20.25cm 20) d = 6   21) $144\pi \approx 452.39 \ cm^3$ 22) $960\pi \approx 3015.93 \ u^3$

23) $122.\bar{6} \ cm^3$ 24) $150\pi \ cm^3$