

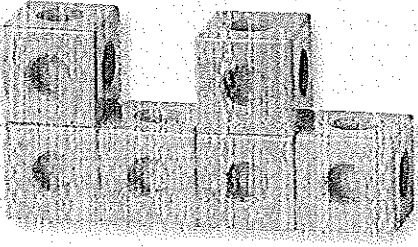
Find the surface area, not the volume, of each block shape on the first grader's worksheet below:

Use .

Build the model.

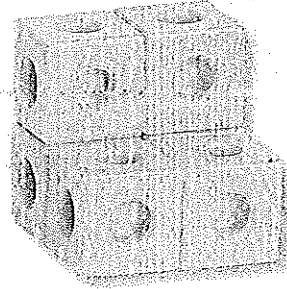
Write how many  you used.

1



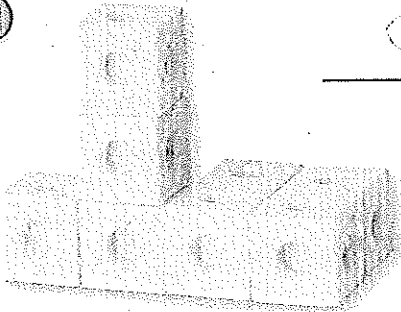
6 cubes

2



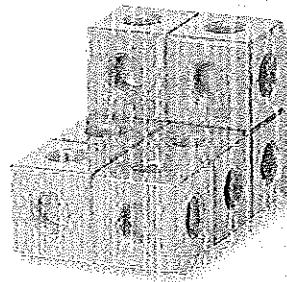
6 cubes

3



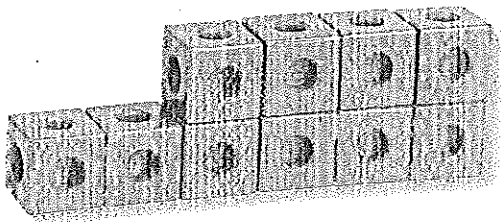
8 cubes

4



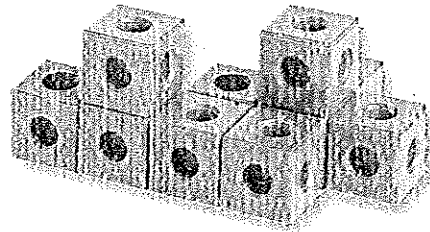
8 cubes

5



12 cubes

6



13 cubes

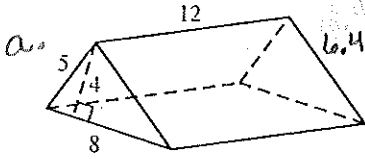
Answers:

0. SA = 26 1. SA = 26 2. SA = 22 3. SA = 32 4. SA = 28 5. SA = 36 6. SA = 40

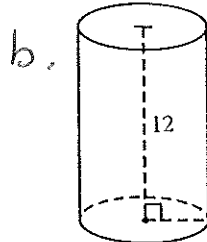
Math 212

Surface Area and Volume - Side 1

1. Find the surface area and volume for each solid.



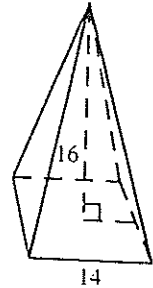
Answers: $SA = 264.8 \text{ unit}^2$
 $SA = 264.8 \text{ unit}^2$
 $V = 192.0 \text{ unit}^3$



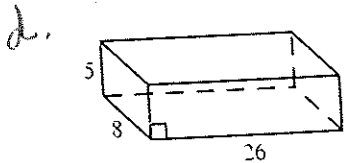
$C = 8\pi$

Answers: $SA = 402.1 \text{ unit}^2$
 $SA = 402.1 \text{ unit}^2$
 $V = 603.2 \text{ unit}^3$

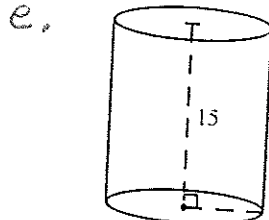
c.



Answers: $SA = 686 \text{ unit}^2$
 $SA = 686.0 \text{ unit}^2$
 $V = 1045.3 \text{ unit}^3$



Answers: $SA = 756 \text{ unit}^2$
 $SA = 756.0 \text{ unit}^2$
 $V = 1040.0 \text{ unit}^3$

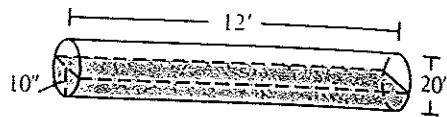


$C = 5\pi$

Answers: $SA = 274.9 \text{ unit}^2$
 $SA = 274.9 \text{ unit}^2$
 $V = 294.5 \text{ unit}^3$

- P. 621 answers:
 #10. 367.2 ft^2
 #12. 791.7 in^2
 #20. b. 72 l
 c. 48 ft^3

2. Water Management This tank has 10 in. of water in it. How much of the tank is filled?



Understanding Concepts

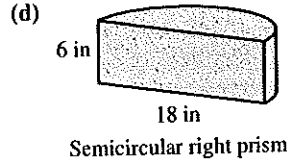
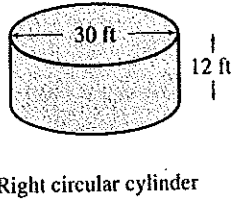
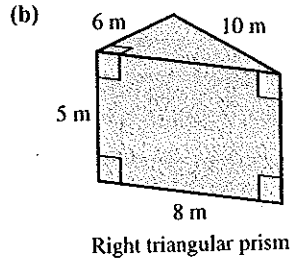
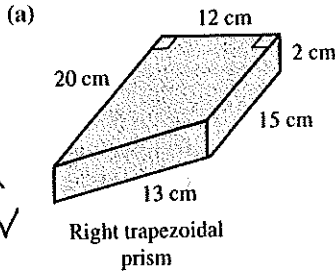
1. Find the surface area of each of these prisms and cylinders.

a. $540 \text{ cm}^2 = \text{SA}$
 $V = 420 \text{ cm}^3$

b. $168 \text{ m}^2 = \text{SA}$
 $120 \text{ m}^3 = V$

c. $2543.4 \text{ ft}^2 = \text{SA}$
 $8482.3 \text{ ft}^3 = V$

d. $531.9 \text{ m}^2 = \text{SA}$
 $763.4 \text{ m}^3 = V$



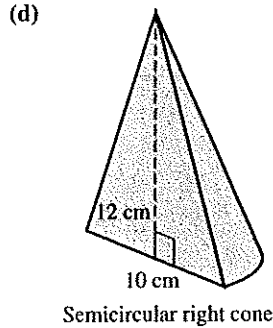
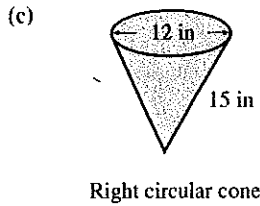
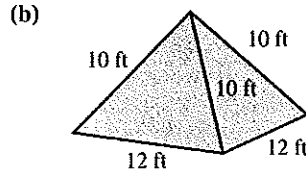
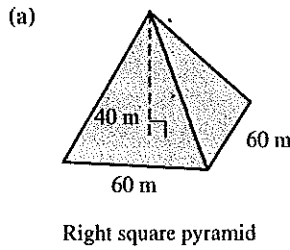
2. Find the surface area of each of these right regular pyramids and right circular cones.

a. $9600 \text{ m}^2 = \text{SA}$
 $48,000 \text{ m}^3 = V$

b. $336 \text{ ft}^2 = \text{SA}$
 $254.4 \text{ ft}^3 = V$

c. $395.6 \text{ in}^2 = \text{SA}$
 $516.5 \text{ in}^3 = V$

d. $201.4 \text{ cm}^2 = \text{SA}$
 $157.1 \text{ cm}^3 = V$



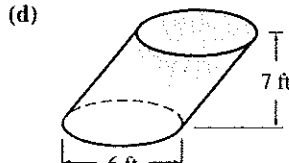
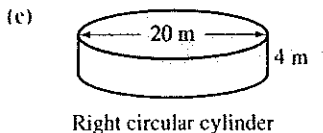
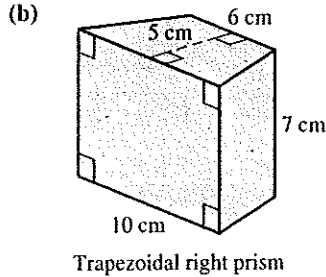
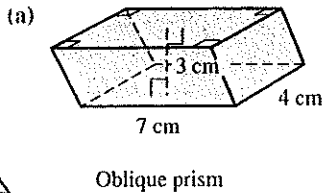
3. Find the volume of each of these prisms and cylinders.

a. SA not possible
 $84 \text{ cm}^3 = V$

b. $267.6 \text{ cm}^2 = \text{SA}$
 $280.0 \text{ cm}^3 = V$

c. $879.6 \text{ m}^2 = \text{SA}$
 $1256.6 \text{ m}^3 = V$

d. SA not possible
 $197.9 \text{ ft}^3 = V$



6
7

Side 1 answers:

1. (a) $SA = 264.8 \text{ units}^2$, $V = 192 \text{ units}^3$
- (b) $SA = 402.1 \text{ units}^2$, $V = 603.2 \text{ units}^3$
- (c) $SA = 686 \text{ units}^2$, $V = 1045.3 \text{ units}^3$
- (d) $SA = 756 \text{ units}^2$, $V = 1040 \text{ units}^3$
- (e) $SA = 274.9 \text{ units}^2$, $V = 294.5 \text{ units}^3$

Side 2 answers:

1. (a) $SA = 540 \text{ cm}^2$, $V = 420 \text{ cm}^3$
- (b) $SA = 168 \text{ m}^2$, $V = 120 \text{ m}^3$
- (c) $SA = 2543.4 \text{ ft}^2$, $V = 8482.3 \text{ ft}^3$
- (d) $SA = 531.9 \text{ in}^2$, $V = 763.4 \text{ in}^3$
2. (a) $SA = 9,600 \text{ m}^2$, $V = 48,000 \text{ m}^3$
- (b) $SA = 336 \text{ ft}^2$, $V = 254.4 \text{ ft}^3$
- (c) $SA = 395.6 \text{ in}^2$, $V = 516.5 \text{ in}^3$
- (d) $SA = 201.4 \text{ cm}^2$, $V = 157.1 \text{ cm}^3$
3. (a) SA cannot be found (need more slant info), $V = 84 \text{ cm}^3$
- (b) $SA = 267.6 \text{ cm}^2$, $V = 280 \text{ cm}^3$
- (c) $SA = 879.6 \text{ m}^2$, $V = 1256.6 \text{ m}^3$
- (d) SA cannot be found (need more slant info), $V = 197.9 \text{ ft}^3$