NAME_____DATE_____PER._____

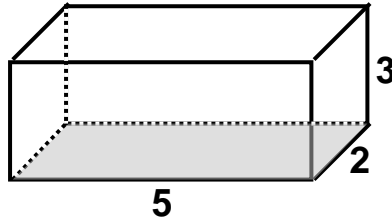## SURFACE AREA & VOLUME OF PRISMS

For each of the prisms below: a) name it; b) find its Lateral Area, c) find its Total Area, and d) find its Volume. Work must be shown to receive credit!

1. Name:

    _____
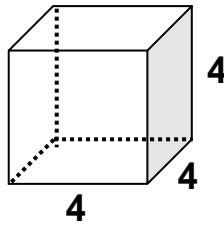
    a) LA = _____

    b) TA = _____

    c) V = _____

3

2

5

2. Name:

    _____

    a) LA = _____

    b) TA = _____

    c) V = _____

4

4

4

3. Name:

    _____

    a) LA = _____

    b) TA = _____

    c) V = _____

6

6

6

6
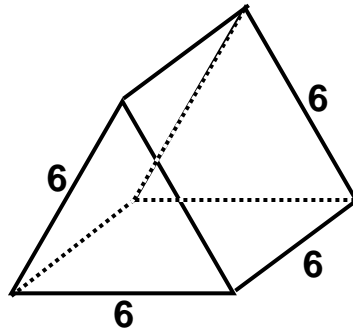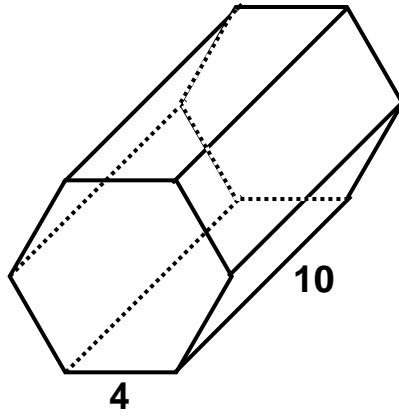
4. Name:

_____

a) LA = _____

b) TA = _____

c) V = _____

The base is a regular hexagon.

10

4

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5. Name:
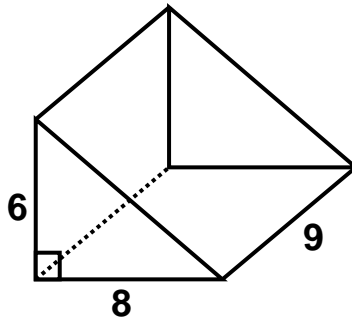
_____

a) LA = _____

b) TA = _____

c) V = _____

7

6   6

3

8

---

6. Name:

_____

a) LA = _____

b) TA = _____

c) V = _____

6

9

8
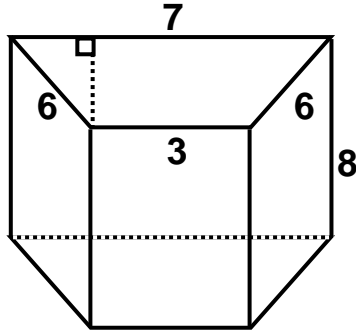
REVIEW PROBLEMS
Answer each problem as indicated.

7. _____	Two flat walls meet in the corner of a classroom. Which postulate best describes this situation? A. Through any three non-collinear points there is exactly one plane. B. If two points lie in a plane, then the line containing them lies in the plane. C. If two lines intersect, then they intersect in exactly one point. D. If two planes intersect, then they intersect in exactly one line.
8. _____	A, B, C, D and E are collinear points. B is between A and C, C is between B and D, and D is between C and E. AE = 34, BD = 16, and AB = BC = CD. What is the length of CE? F. 10 G. 16 H. 18 J. 24
9. _____	If an angle is bisected and then 30° is added to the measure of the bisected angle, the result is the measure of a right angle. What is the measure of the original angle? A. 30° B. 60° C. 75° D. 120°
10. _____	Mandy made a circular tabletop that has an area of 452 in². Which is closest to the radius of the tabletop? F. 9 in. G. 12 in. H. 24 in. J. 72 in.
11. _____	Write the equation of the line passing through (3, 2) and (-1, 6).

Find the correct answer for each of the following. Clearly circle or bubble in your answers as necessary. Work must be shown in order to receive credit!

12. Taylor is wrapping a birthday gift in the rectangular box shown below. She wants to cut just one rectangular piece of wrapping paper to cover the box.

4 in

9 in

18 in

What is the area of the smallest piece of paper that Taylor can use to wrap the gift?

Record your answer and fill in the bubbles on the grid below. Be sure to use the correct place value.

13. The area of the base of a prism is 6x square inches, and the height of the prism is 3.5x inches. If the prism has a volume of 3,024 cubic inches, what is the value of 'x'?

A. x = 8.5

B. x = 15

C. x = 10.5

D. x = 12

14. Frank wants to paint his room in the school colors of maroon and white. The floor and ceiling will be white, and all the walls will be maroon. The door will also be white.

10 ft

3 ft

7 ft

12 ft

12 ft

If one gallon of paint covers 400 sq ft, how many gallons of each color will he need?

A. 1 gallon white, 1 gallon maroon

B. 1 gallon white, 2 gallons maroon

C. 2 gallons white, 2 gallons maroon

D. 2 gallons white, 3 gallons maroon

15. A cube has a side of 7 cm. Find the number of square centimeters in the total surface area.

Record your answer and fill in the bubbles on the grid below.