Density Task

Application Rosa Avila is a plumbing contractor. She needs to deliver 200 lengths of steel pipe to a construction site. Each cylindrical steel pipe is 160 cm long, has an outer diameter of 6 cm, and has an inner diameter of 5 cm. Rosa needs to know whether her quarter-tonne truck can handle the weight of the pipes. To the nearest kilogram, what is the mass of these 200 pipes? How many loads will Rosa have to transport to deliver the 200 lengths of steel pipe? (Steel has a density of about 7.7 g/cm^3. One tonne equals 1000 kg.)

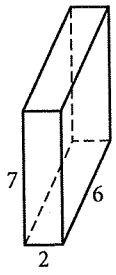
Density Task

Application Rosa Avila is a plumbing contractor. She needs to deliver 200 lengths of steel pipe to a construction site. Each cylindrical steel pipe is 160 cm long, has an outer diameter of 6 cm, and has an inner diameter of 5 cm. Rosa needs to know whether her quarter-tonne truck can handle the weight of the pipes. To the nearest kilogram, what is the mass of these 200 pipes? How many loads will Rosa have to transport to deliver the 200 lengths of steel pipe? (Steel has a density of about 7.7 g/cm^3. One tonne equals 1000 kg.)

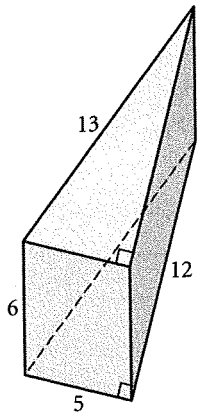
Name _____ Period _____ Date _____

In Exercises 1–8, find the surface area of each solid. All quadrilaterals are rectangles, and all measurements are in centimeters. Round your answers to the nearest 0.1 cm^2.

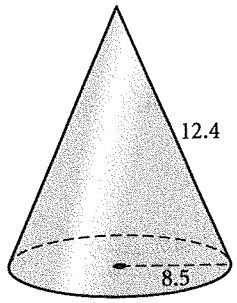
1.



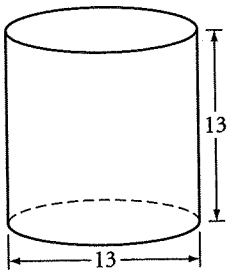
2.



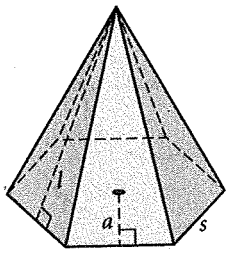
3.



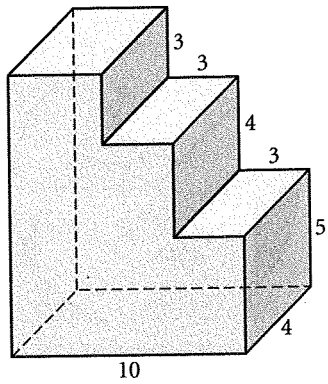
4.



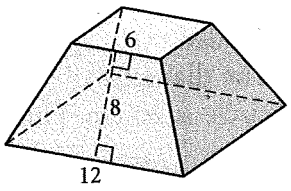
5. Base is a regular hexagon. $s = 6$, $a \approx 5.2$, and $l = 9$.



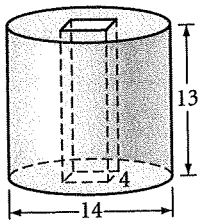
6.



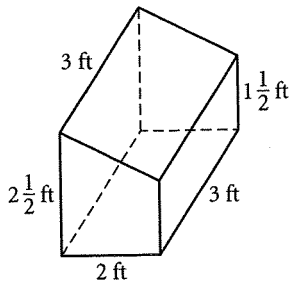
7. Both bases are squares.



8. A square hole in a round peg

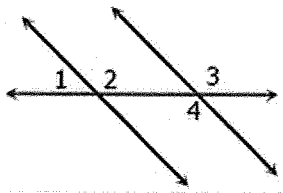


9. Ilsa is building a museum display case. The sides and bottom will be plywood and the top will be glass. Plywood comes in 4 ft-by-8 ft sheets. How many sheets of plywood will she need to buy? Explain. Sketch a cutting pattern that will leave her with the largest single piece possible.



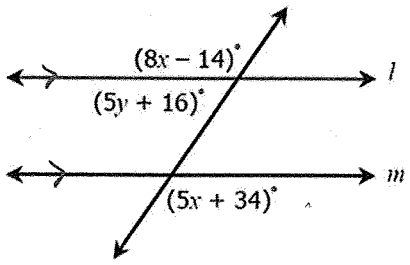
End of Year Review
Line and Angle Relationships

1) **Given:** $\angle 1$ and $\angle 2$ form a linear pair; $\angle 2 \cong \angle 4$
Prove: $\angle 1$ and $\angle 3$ are supplementary



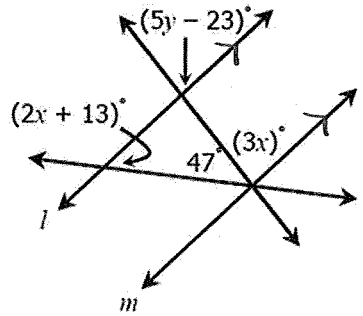
Statements	Reasons
1. $\angle 1$ and $\angle 2$ form a linear pair	**1.**
2. $\angle 1$ and $\angle 2$ are supplementary	**2.**
3. $m\angle 1 + m\angle 2 = 180°$	**3.**
4. $\angle 2 \cong \angle 4$	**4.**
5. $\angle 3 \cong \angle 4$	**5.**
6. $\angle 2 \cong \angle 3$	**6.**
7. $m\angle 2 = m\angle 3$	**7.**
8. $m\angle 1 + m\angle 3 = 180°$	**8.**
9. $\angle 1$ and $\angle 3$ are supplementary	**9.**

2)



$x =$ _____ $y =$ _____

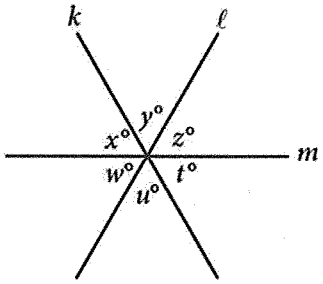
3)



$x =$ _____ $y =$ _____

SAT Practice!

4)



Note: Figure not drawn to scale.

In the figure above, lines k, ℓ, and m intersect at a point. If $x + y = u + w$, which of the following must be true?

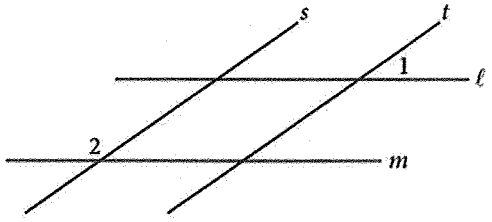
I. $x = z$

II. $y = w$

III. $z = t$

A) I and II only
B) I and III only
C) II and III only
D) I, II, and III

5)



In the figure above, lines ℓ and m are parallel and lines s and t are parallel. If the measure of $\angle 1$ is 35°, what is the measure of $\angle 2$?

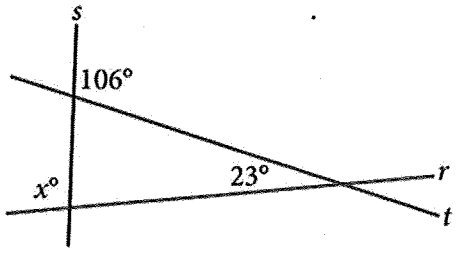
A) 35°
B) 55°
C) 70°
D) 145°

6)

Note: Figure not drawn to scale.

On $\overline{PS}$ above, $PQ = RS$. What is the length of $\overline{PS}$?

7) Intersecting lines r, s, and t are shown below.



What is the value of x ?