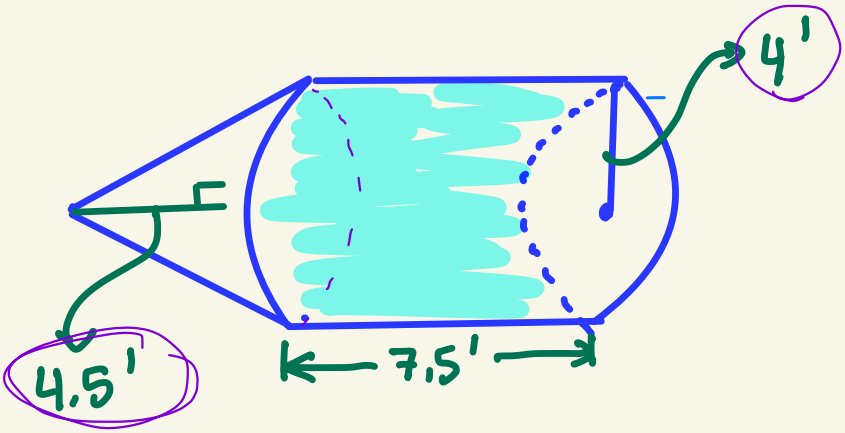
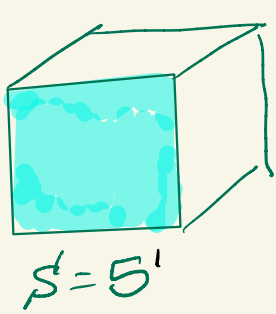
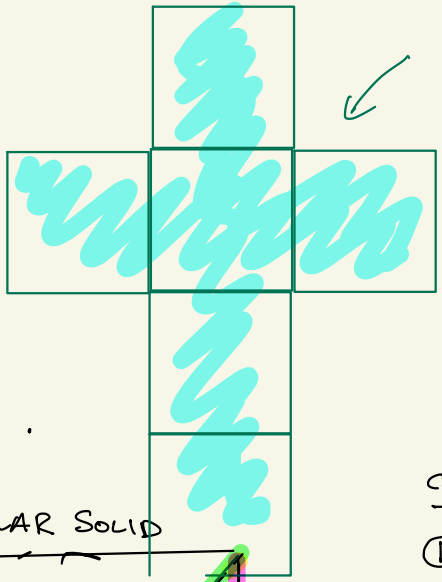
Ch. 16 - Board Problems



Find the volume of this figure.

Ch. 16 - Surface Area of Solids.



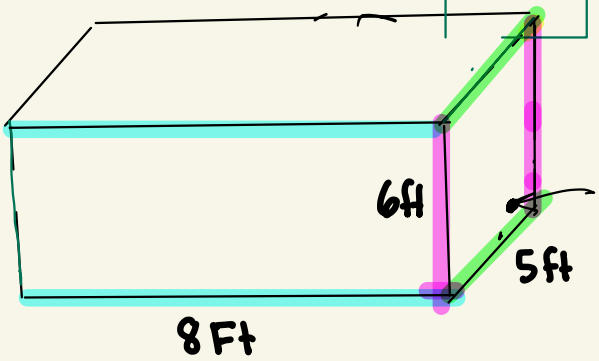


$SA_{CUBE} = 6 \cdot s^2$

$SA_{CUBE} =$

$SA_{CUBE} =$

RECTANGULAR SOLID



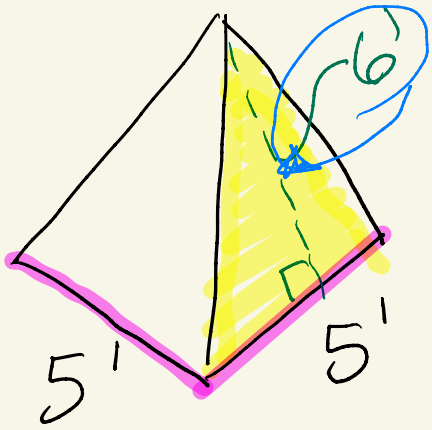
CALCULATING SA RECT. SOLID.

1. WRITE IN Parallel lines
2. Calculate area of 3 FACES
3. Add shown faces.
4. MULTIPLY X 2

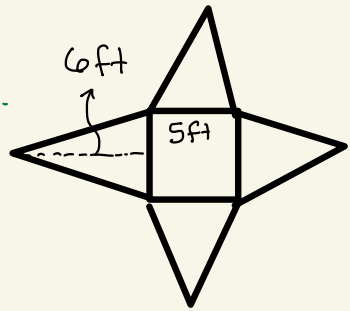
AREA of RECTANGLE

$A = B \cdot h$

PYRAMID



SLANT HEIGHT



① CALCULATE THE SQUARE Base : ____

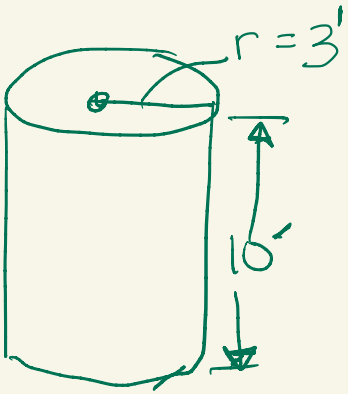
② CALCULATE THE AREA OF ONE △

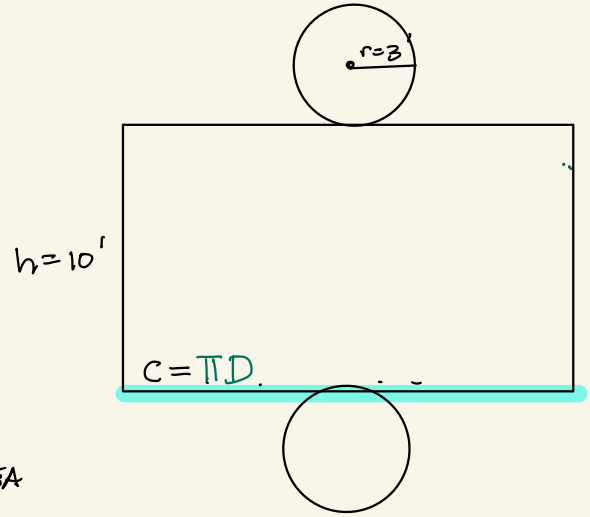
$$A_T = \frac{B \cdot H}{2} = \quad = \_\_\_$$

③ 4 * ____ = ____

④ Add Area Base ____

TOTAL ____





1) CALCULATE THE AREA OF ONE CIRCLE.

$A = \pi r^2 =$ $=$ _____

2) MULT. ANSWER BY 2: _____ AREA OF BOTH O's

3) Calc. Length of rect. $C = 2\pi r$

$C =$ $=$ _____ Linear

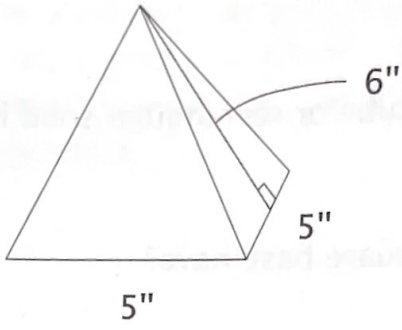
4) Calc Area Rect. A_R = Base · height

$=$

$A_R =$

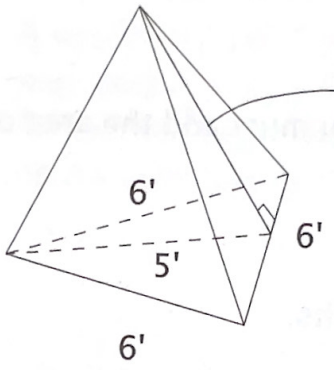
TOTAL: _____

9.



SA = _____

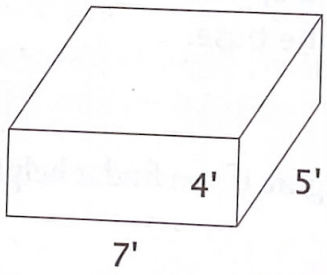
10.



height is 7 ft

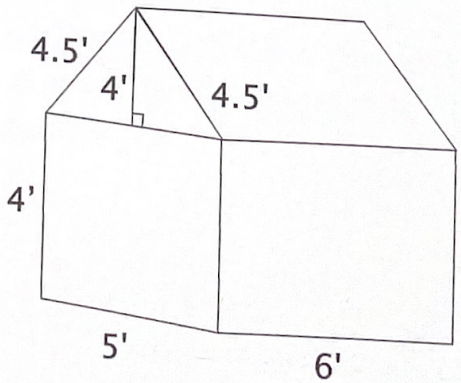
SA = _____

11.



SA = _____

12.



SA = _____

Hint for #12: You will need to find the area of seven rectangles and two triangles.

16A

Answer the questions or fill in the blanks.

1. How many faces, or flat surfaces, does a cube or rectangular solid have?

2. How many faces does a pyramid with a square base have?

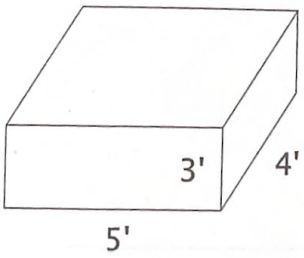
3. How many faces does a pyramid with a triangular base have?

4. In order to find the surface area of a cylinder, you must add the area of two _____ and one _____ .

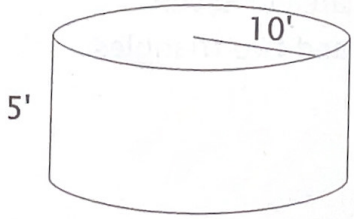
5. Surface area is measured in _____ units.

6. In order to find the area of the lateral side of a cylinder, multiply the _____ by the _____ of the base.

Find the surface area of each solid. Sketch the flattened figure if you find it helpful.

7. 

SA = _____

8. 

SA = _____

LESSON PRACTICE

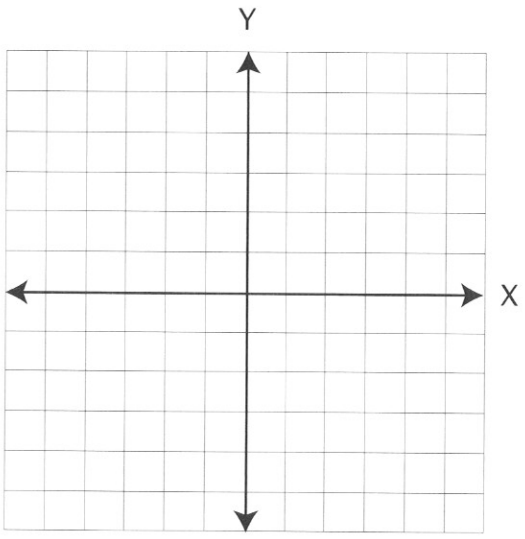
Follow the directions for each set of equations.

For #1-3 $X + Y = 1$, $Y = X + 3$

1. Draw each line and estimate the solution.

2. Use the substitution method to find Y.

3. Using the solution to #2, substitute to find X.



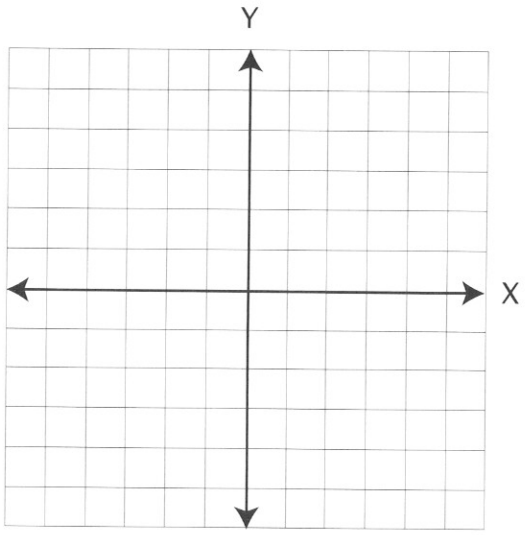
The Y-intercept for one of the next lines in #4 is off the graph. See if you can estimate where it should be. If you can't, use a larger piece of graph paper.

For #4-6 $2X - Y = 4$, $Y = -X + 11$

4. Draw each line and estimate the solution.

5. Use the substitution method to find Y.

6. Using the solution to #5, substitute to find X.

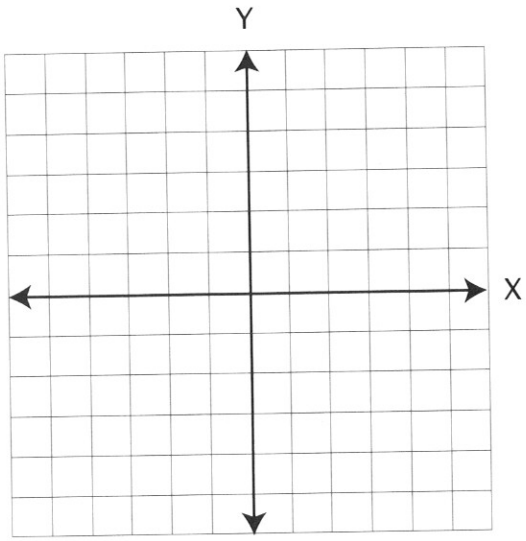


For #7–9 $2X + Y = -1$, $Y = -3X$

7. Draw each line and estimate the solution.

8. Use the substitution method to find Y.

9. Using the solution to #8, substitute to find X.



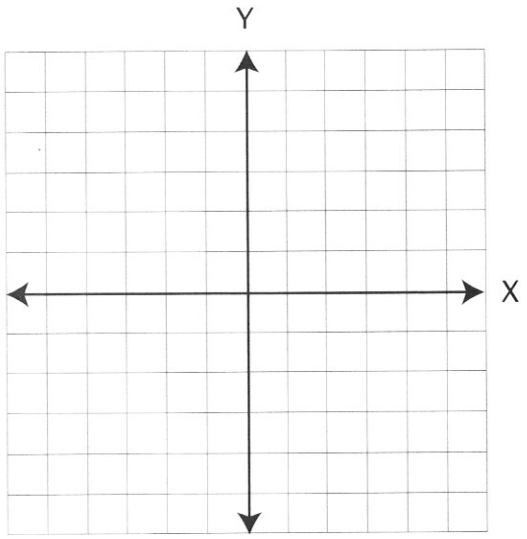
For #10 $2X + 3Y = 29$, $5X - Y = 30$

10. Use the substitution method to solve the equations. First change the second equation to the slope-intercept form.

SYSTEMATIC REVIEW

For #1-3 $Y = X + 1$ and $Y = 2X - 2$.

1. Sketch and estimate the solution.



2. Using the substitution method, find X.

3. Using the solution to #2, find Y.

For #4-6 $Y - X = 4$ and $Y + 2X = 1$.

4. Sketch and estimate the solution.

5. Using the substitution method, find X.

6. Using the solution to #5, find Y.

7. Find the slope through (4, 5) and (1, 3) by computing. $\frac{Y_2 - Y_1}{X_2 - X_1} = m$

8. Find the Y-intercept of the line in #7.

9. Describe the line in #7 using the slope-intercept form, then using the standard equation of a line.

10. Find the slope of a line parallel to $Y = -\frac{4}{3}X - 2\frac{1}{3}$ that passes through (2, 2).

11. Find the Y-intercept of of the line in #10.

12. Describe the line in #10 using the slope-intercept form, then using the standard equation of a line.

13. Fill in the blanks so that each value in the second line is the same as the value directly above it.

____, 4 , 9 , ____, ____, ____, ____, 64 , ____, ____, 121 , ____, ____, ____, 225

1^2 , ____, ____, 4^2 , ____, ____, ____, ____, 9^2 , 10^2 , ____, ____, ____, ____, 15^2

For #14-16 Use a USA map to find the following information. Assume 25 mpg and 50 mph.*

14. Day One: Travel between Seattle and San Francisco. How far will we go?

15. We leave at 7:35 AM and our ETA (estimated time of arrival) is _____.

16. How much gasoline is consumed?
At $1.269 per gallon, how much does it cost?

17. Write 12/13 as a decimal rounded to the nearest thousandth.

18. Distribute: A(2A - A + 3) =

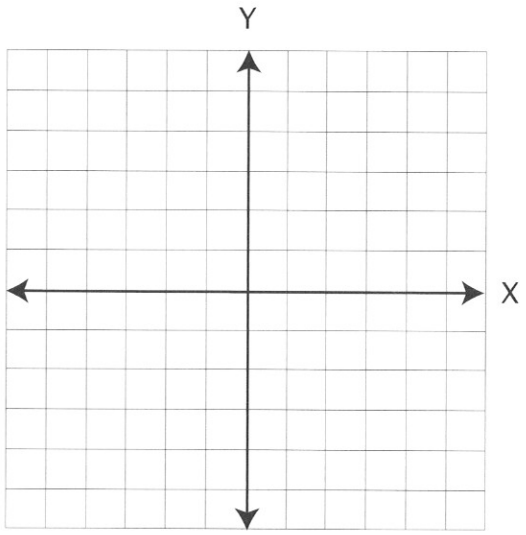
19. Is 97 prime or composite?

20. What is the least common multiple of 6 and 4?

SYSTEMATIC REVIEW

For #1-3 $Y = 2X + 6$ and $X + Y = -6$.

1. Sketch and estimate the solution.



2. Using the substitution method, find X.

3. Using the solution to #2, find Y.

For #4-6 $Y + X = -5$ and $Y - 2X = 4$.

4. Sketch and estimate the solution.

5. Using the substitution method, find X.

6. Using the solution to #5, find Y.

7. Find the slope through (0, 0) and (-2, 4) by computing. $\frac{Y_2 - Y_1}{X_2 - X_1} = m$

8. Find the Y-intercept of #7.

9. Describe the line in #7 using the slope-intercept form, then using the standard equation of a line.

10. Find the slope of a line perpendicular to $Y = -\frac{4}{3}X - 2\frac{1}{3}$ that passes through (2, 2).

11. Find the Y-intercept of the line in #10.

12. Describe the line in #10 using the slope-intercept form, then using the standard equation of a line.

13. Fill in the blanks so that each value in the second line is the same as the value directly above it.

1, ____, ____, ____, 25, ____, ____, ____, 81, ____, ____, 144, ____, ____, ____

____, 2^2, ____, ____, ____, 6^2, ____, ____, ____, ____, ____, 12^2, 13^2, ____, 15^2

For #14-16 Use a USA map to find the following information. Assume 25 mpg and 50 mph.

14. Day Two: Travel between San Francisco and Los Angeles. How far will we go?

15. We leave at 6:14 AM and our ETA (estimated time of arrival) is_____ .

16. How much gasoline is consumed? At $1.199 per gallon, how much does it cost?

17. Write 9/28 as a decimal rounded to the nearest thousandth.

18. Use the GCF to simplify 9A + 27B - 81 = 18C.

19. What are the prime factors of 435?

20. $\sqrt{64}$ =