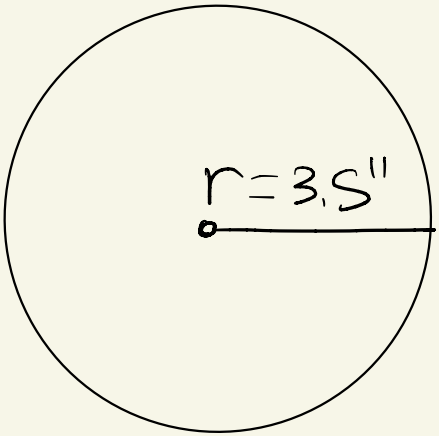
Ch. 14- Board Problems

Find Area & Circumference

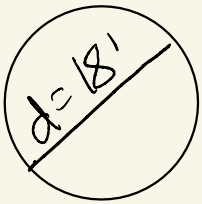
1)



C = _____

A = _____

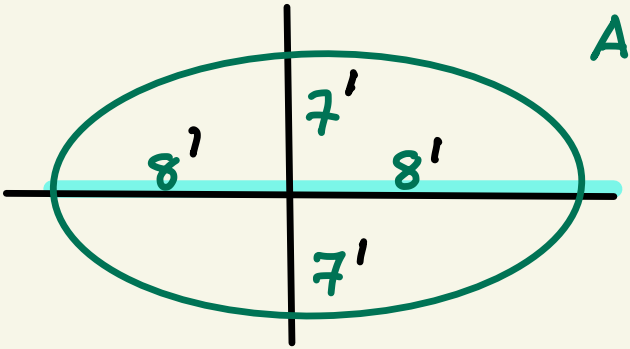
2)



C = _____

A = _____

3) Find Area of an ellipse.

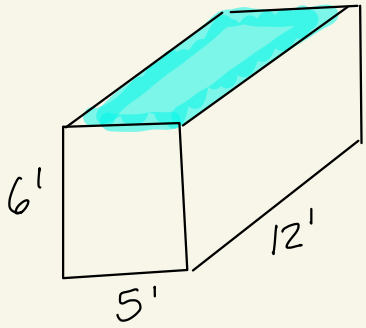


A = _____

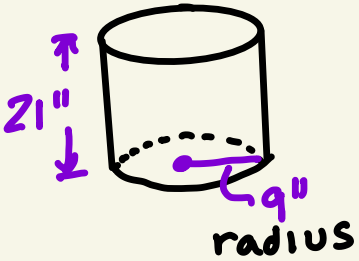
Ch. 14 - Volume of Rectangular Solid and Cylinder

$V = (\text{Area of Base}) * (\text{Perpendicular Height})$

$V = B \cdot h$



Volume of a Cylinder



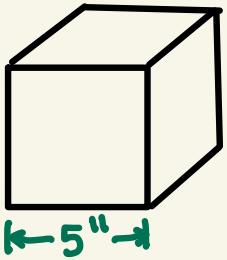
$V = B \cdot h$

$V = (\quad)h$

$= (\quad)(\quad)(\quad)$

$= \_\_\_\_\_$

Volume of a Cube



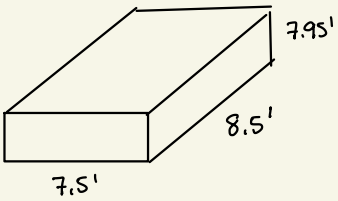
$V = B \cdot h$

$=$

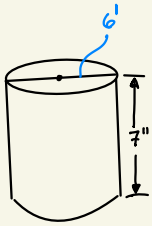
$=$

$\_\_\_\_\_$

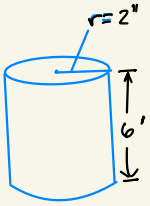
$V = Bh$

1. 

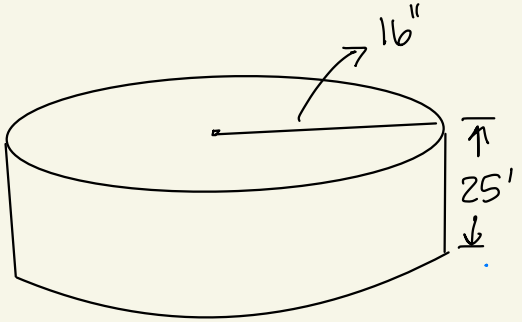
$V =$ _____

2. 

$V =$ _____

3. 

$V =$ _____



$V =$ _____

5. $\sqrt{169} =$

6. $\sqrt{256} =$

Fill in the blanks.

1. The basic formula for volume is area of the _____ times the _____ .

2. The flat surfaces that make up a rectangular solid are called _____ .

3. All the faces of a cube are _____ .

4. The lines where the faces of a rectangular solid meet are called _____ .

5. The base of a cylinder is a _____ .

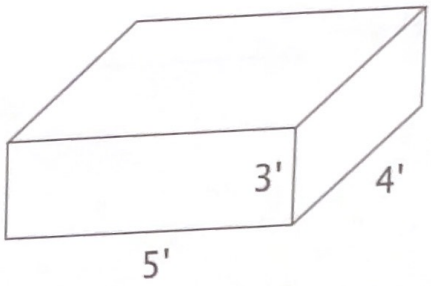
6. The volume of a geometric solid is given in _____ units.

7. The edges of a rectangular solid meet in points called _____ .

8. The volume of a cube with edges 4" long is _____ .

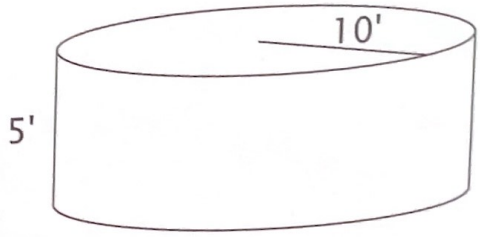
Find the volume of the solids.

9.



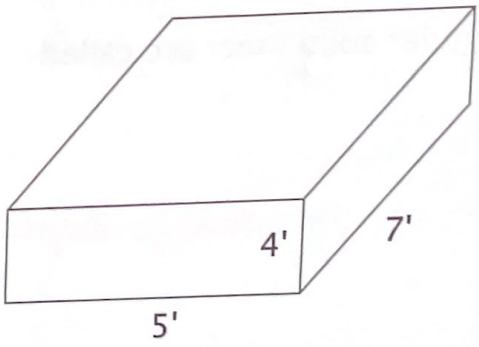
V = _____

10.



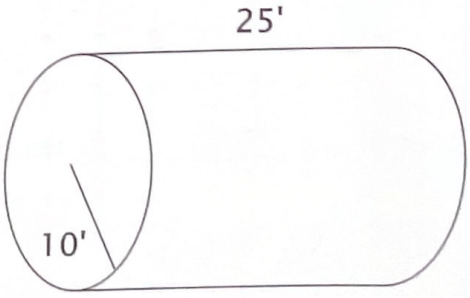
V = _____

11.



V = _____

12.

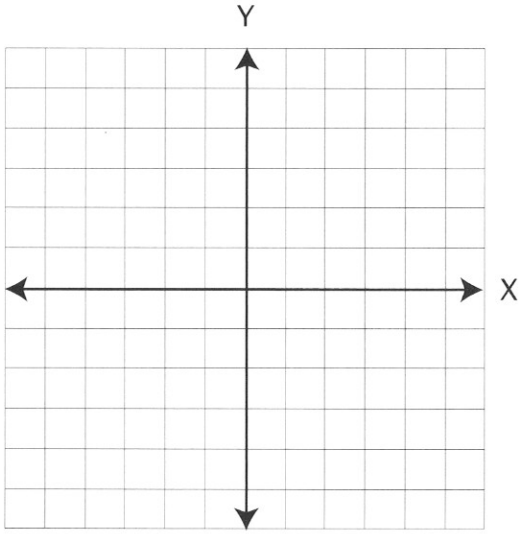


V = _____

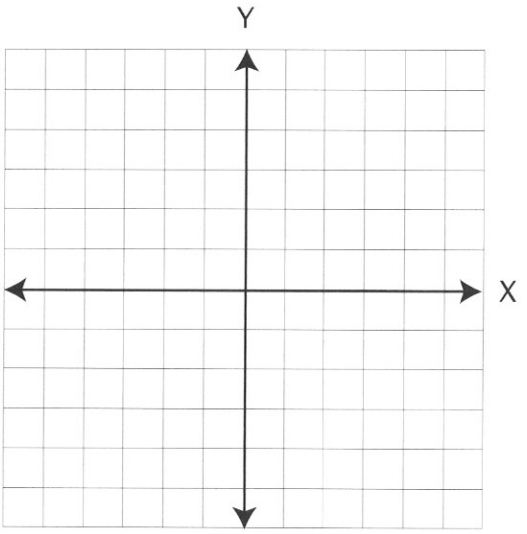
LESSON PRACTICE

Follow the directions for each graph.

1. Draw line *a*: Y = 2X + 5/2.
2. Draw line *b*: Y = -1/2 X + 5/2.
3. What is the point where line *a* and line *b* intersect?
4. Draw line *c*: Y = -1/2 X - 2.
5. Draw line *d*: Y = -X - 3.
6. What is the point where line *c* and line *d* intersect?



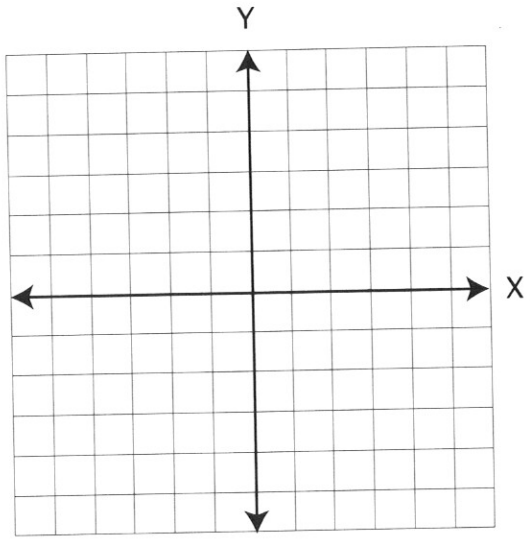
7. Draw line *e*: X - Y = 2.
8. Draw line *f*: X + 3Y = 6.
9. What is the point where line *e* and line *f* intersect?
10. Draw line *g*: 2X + Y = -2.
11. Draw line *h*: Y = 1/3 X + 5.
12. What is the point where line *g* and line *h* intersect?



13. Draw line *j*: $4Y = -X + 12$.

14. Draw line *k*: $Y = X + 3$.

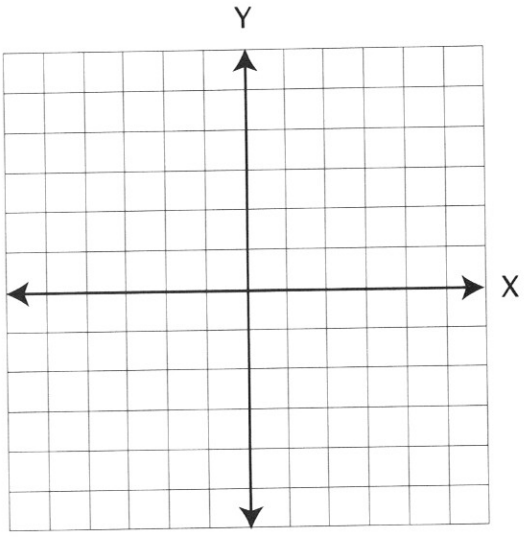
15. What is the point where line *j* and line *k* intersect?



16. Draw line *r*: $2Y = -X - 2$.

17. Draw line *s*: $Y = 1/2\ X - 3$.

18. What is the point where line *r* and line *s* intersect?

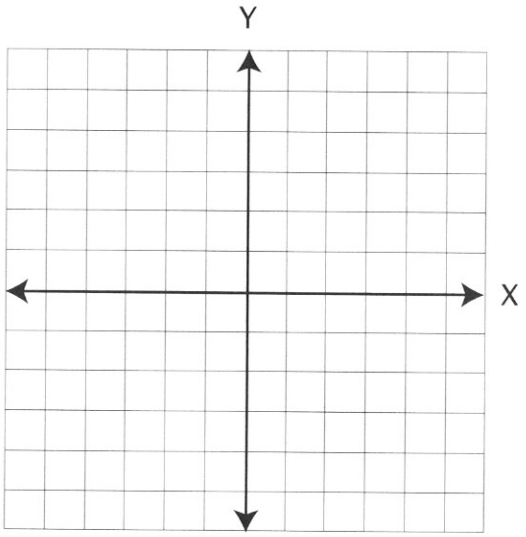


Follow the directions.

1. Draw line *a*: Y = -4X - 2.
   Label it *a*.

2. Draw line *b*: Y = X + 3.
   Label it *b*.

3. Record the point where line *a* and line *b* intersect.



4. Given: m = -4 through the point (1, -3).

   Find the intercept (b).

5. Describe the line in #4 using the slope-intercept form, then using the standard equation of a line.

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

7. Find the intercept of the line in #6.

8. Describe the line in #6 using the slope-intercept form, then using the standard equation of a line.

9. Find the slope and intercept of a line parallel to Y = 2/3 X + 3 that passes through (4, 4).

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

Simplify and solve.

11. $8X - 3X + 7 = 4X + 8$

12. $4Q + 12 = 20$ (Remember the GCF)

13. $5^2 \div 5 + 3(X + 7) = 2X + 27$

14. $7^2 \times 2 - 4(Y + 11) = 3Y - 2$

15. $.6 - \frac{2}{3}X = 11$ (Hint: First change all numbers into fractions.)

16. $|-8 - 4| - 6Y = 32 \div |-8|$

For #17–18: Mario's car has a 16–gallon tank. He left for a four–day round trip.

17. Day 1: He left at 7:45 AM and arrived at 2:15 PM after driving 338 miles. What was his average speed in miles per hour? (Tip: Find number of hours and divide that number into 338.)

18. When he left, he had a full tank of gas. At the end of the day, it took 13 gallons to refill his tank. How many miles per gallon did he get? (Tip: Divide the number of miles driven by the number of gallons used.)

19. Fill in the blanks and explain the pattern. 2, 4, 8, 16, 32, 64, 128

$2^1\ 2^2\ 2^3\ 2^4\ 2^5\ 2^6\ 2^7$

20. Fill in the blanks and explain the pattern.

0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55

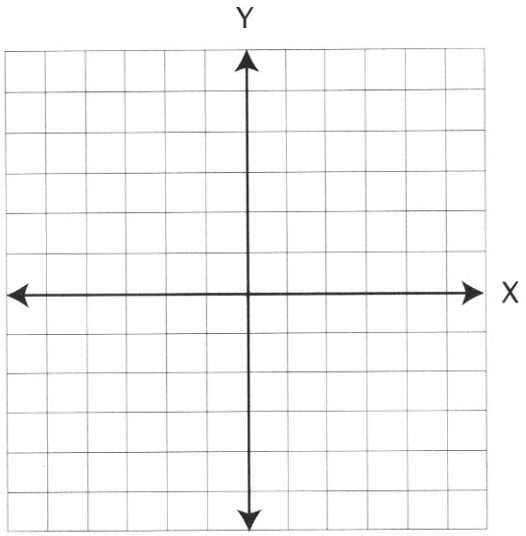
Fibonacci Numbers

Follow the directions.

1. Draw line *a*: $Y = -\frac{1}{2}X + 1$. Label it *a*.

2. Draw line *b*: $Y = -\frac{3}{2}X + 5$. Label it *b*.

3. Record the point where line *a* and line *b* intersect.



4. **Given:** $m = -\frac{3}{2}$ through the point (-1, 1).

   Find the intercept (b).

5. Describe the line in #4 using the slope-intercept form, then using the standard equation of a line.

6. Find the slope through (-4, 2) and (1, -4) by computing. $\frac{Y_2 - Y_1}{X_2 - X_1} = m$

7. Find the intercept of the line in #6.

8. Describe the line in #6 using the slope-intercept form, then using the standard equation of a line.

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

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

Simplify and solve.

11. $16X - 8X = 56$

12. $18A - 15 = 24$

13. $(1 - 7)^2 - 8N + 11 = -3$

14. $.78 + .4 = 2X$

15. $.3 + \frac{1}{2}A = 2A - 1.8$

16. $(4 - 8)^2 \times 6 - 3 \times 5^2 = 7Y$

For #17–18: Mario's car has a 16–gallon tank. He left for a four–day round trip.

17. Day 2: He left at 6:50 AM and arrived at 2:05 PM after driving 348 miles. What was his average speed in miles per hour?

18. When he left, he had a full tank of gas. At the end of the day, it took 14.5 gallons to refill his tank. How many miles per gallon did he get?

19. Fill in the blanks and explain the pattern.

    1, 4, 9, 16, 25, ___ , ___ , ___ , ___ , 100

20. Fill in the blanks and explain the pattern.

    1/2, 1/6, 1/18, 1/54, ___ , ___ , ___