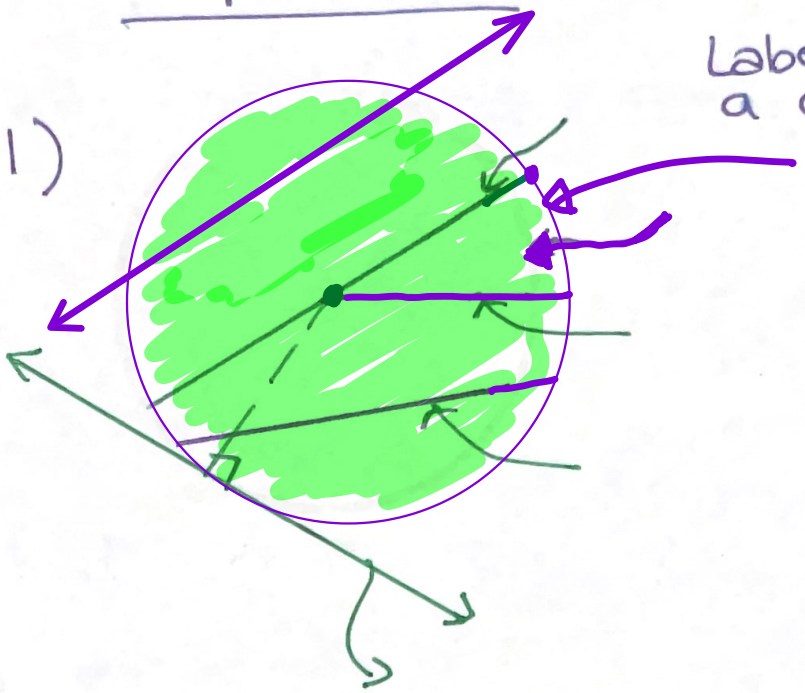
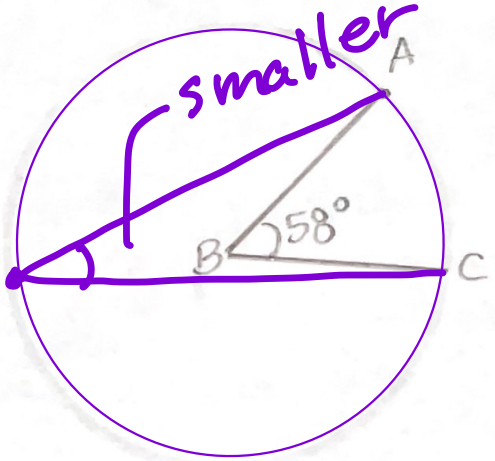
Chapter 13 - Area of a Circle/Ellipse

Label parts of a circle.

1)



2)

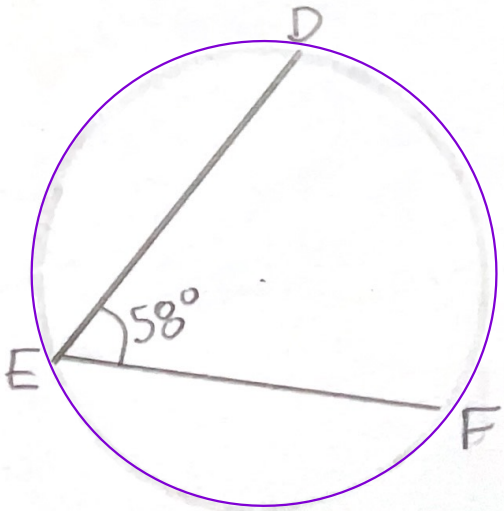


- $m\overset{\frown}{AC}$ = _____

$m\angle ADC$ = _____

$m\overset{\frown}{ADC}$ = _____

4)



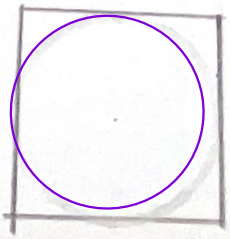
$m\angle DEF = 58°$

$m\overset{\frown}{DF}$ = _____

$m\angle DEF$ = _____

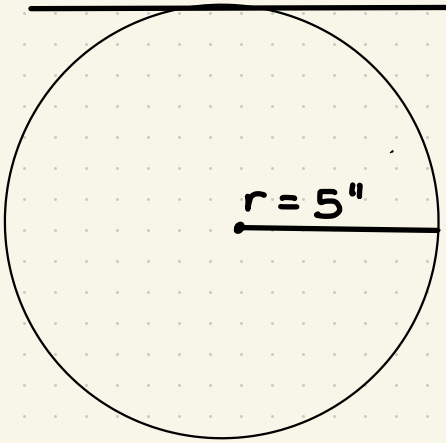
5)

_____ is inscribed



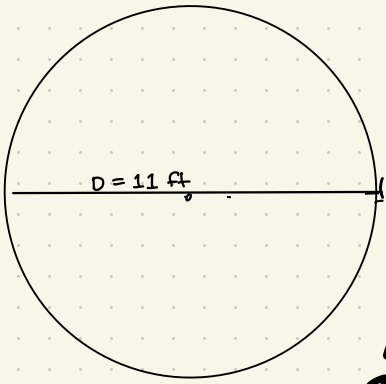
— is circumscribed

Ch. 13 - AREA and CIRCUMFERENCE



$r =$
$d =$
$r^2 =$
$A =$
$C =$

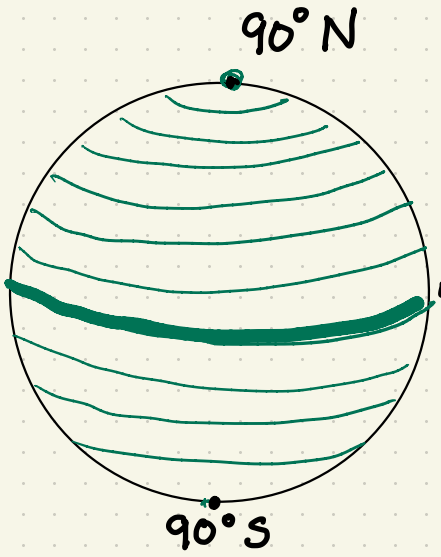
AREA = _____
Circum. = _____



$r =$
$d =$
$r^2 =$
$A =$
$C =$

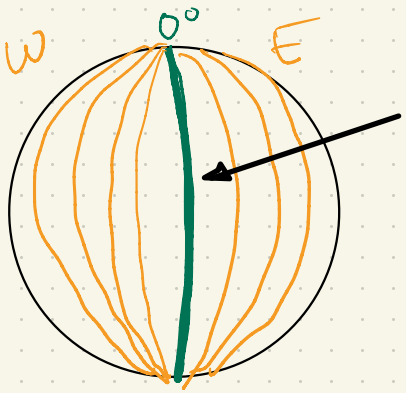
Area = _____
Circum = _____

LATITUDE & LONGITUDE



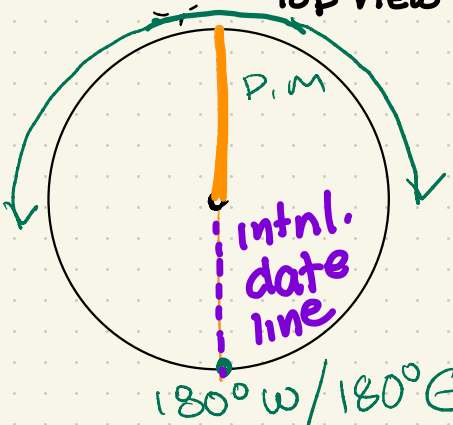
LATITUDE

LONGITUDE



PRIME MERIDIAN
0° LONGITUDE

Top view of longitude

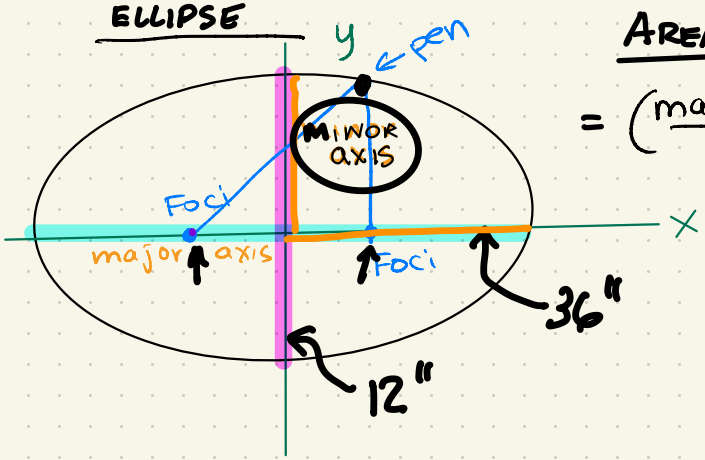


Sammamish, WA
LATITUDE: 47° 38' 31" North
LONGITUDE: 122° 4' 45" West

minutes
60' = 1°
seconds
60" = 1'

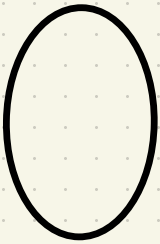
degrees : minutes : seconds

ELLIPSE



AREA OF ELLIPSE

$$= \left(\frac{\text{major}}{2}\right)\left(\frac{\text{minor}}{2}\right)\pi$$

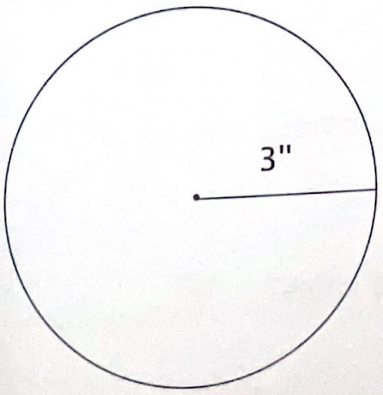


LESSON PRACTICE

Fill in the blanks.

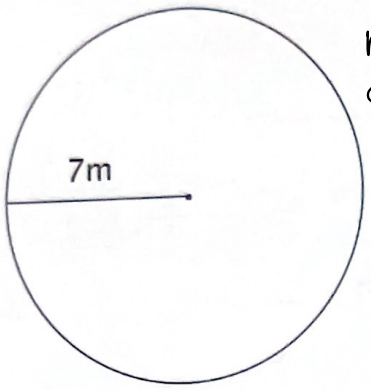
1. Half the diameter of a circle is the _____ .
2. The perimeter, or distance around, a circle is the _____ .
3. The formula for the circumference of a circle is _____.
4. The formula for the area of a circle is _____ .
5. To find the area of an ellipse, multiply one-half the _____ axis times one-half the _____ axis times _____ .
6. Area is always labeled with _____ units.
7. The equator is a line of _____ .
8. Lines of _____ go through the North and South Poles.
9. There are 60 _____ in a degree.
10. The longitudinal line going through Greenwich, England, is called the _____ .

Use the given information to find the circumference and/or area of the figures shown.



11. circumference = _____

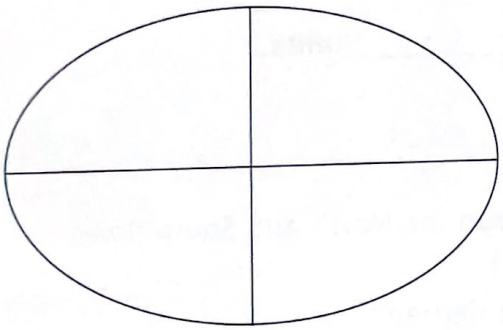
12. area = _____



r =
d = 1
r^2 =
A = r
C = .
A =

(Use the fractional value of π.)

13. area = _____



long axis = 12 ft
short axis = 8 ft

14. area = _____

Problems 15–18 are optional. Use a world map or the internet to find the answers to #15–17. Your answers may vary somewhat depending the precision of your source.

15. What are the latitude and longitude of Frankfurt, Germany?

16. What are the latitude and longitude of Mumbai, India?

17. What is the distance in miles between these two cities?

18. A mile is approximately 1.6 kilometers. What is the distance in kilometers between the two cities?

Kuta Software - Infinite Algebra 1

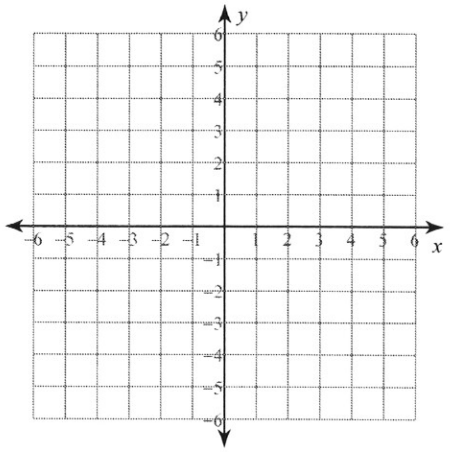
Name_____

Graphing Lines

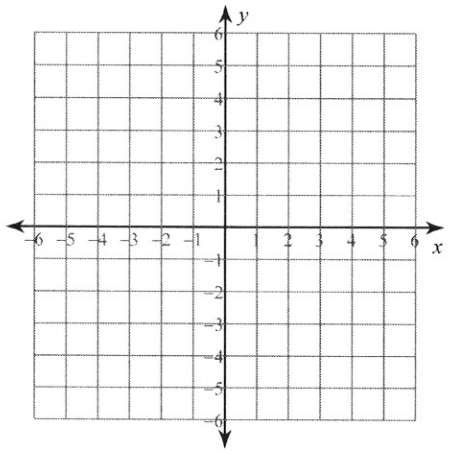
Date_____ Period____

Sketch the graph of each line.

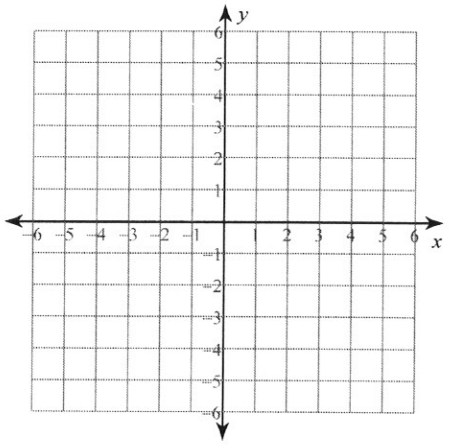
1) $y = \frac{7}{2}x - 2$



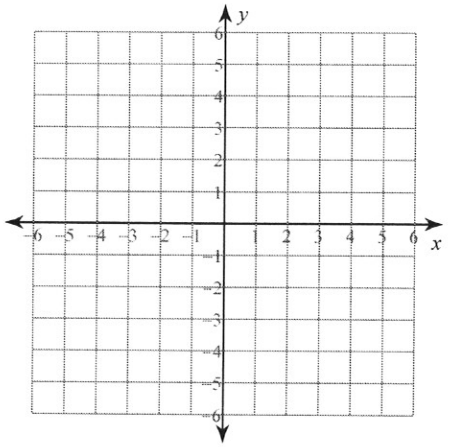
2) $y = -6x + 3$



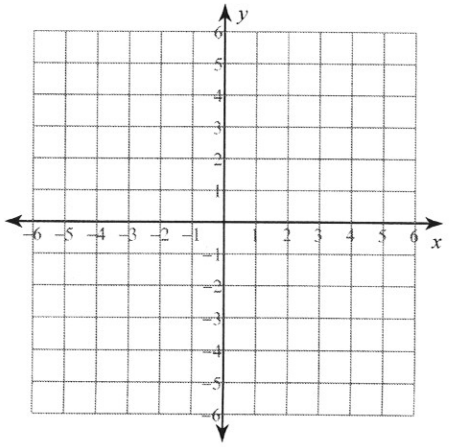
3) $y = -5$



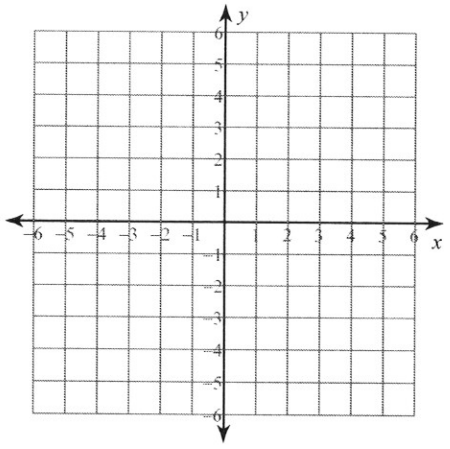
4) $y = \frac{6}{5}x + 1$



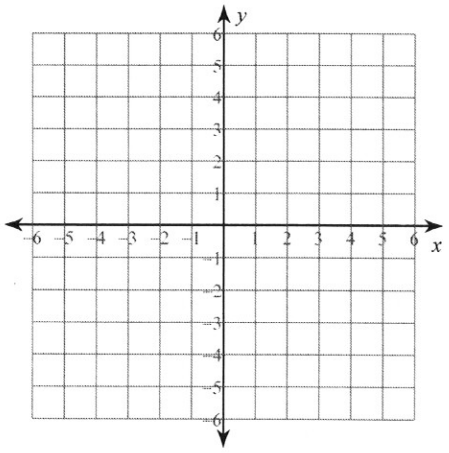
5) $y = \frac{1}{4}x + 2$



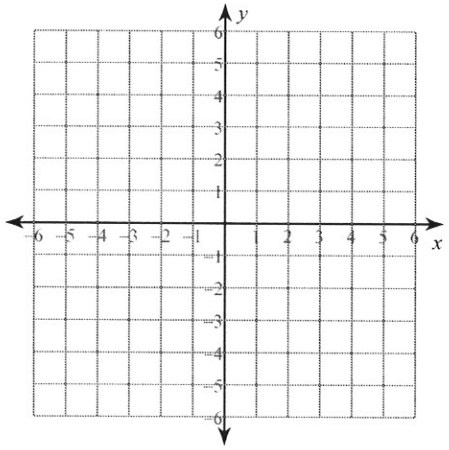
6) $x = 5$



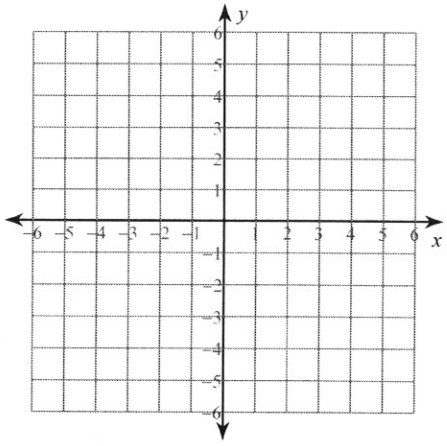
7) $y = \frac{5}{3}x$



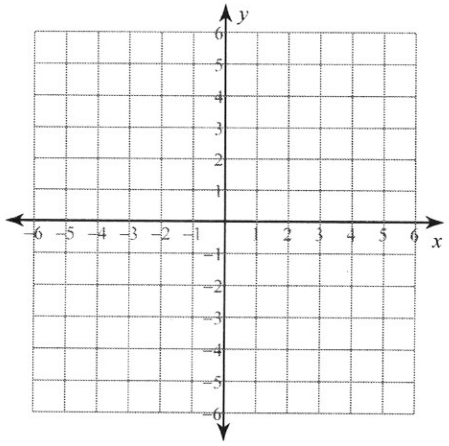
8) $x = 0$



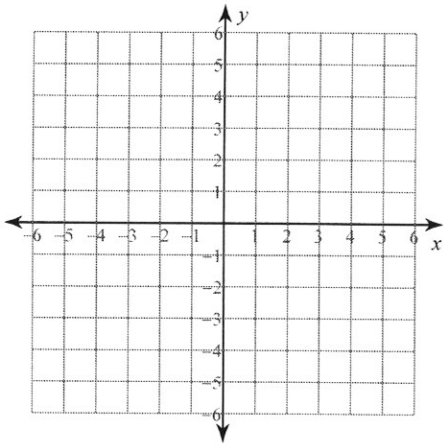
9) $y = -\frac{1}{3}x + 3$



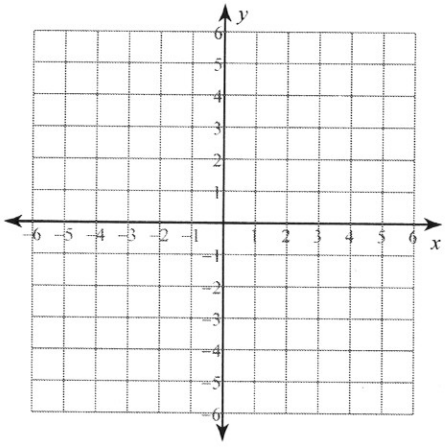
10) $y = \frac{1}{5}x - 4$



11) $y = \frac{1}{2}x - 2$



12) $y = 2x + 5$



LESSON PRACTICE

Follow the steps to graph each inequality.

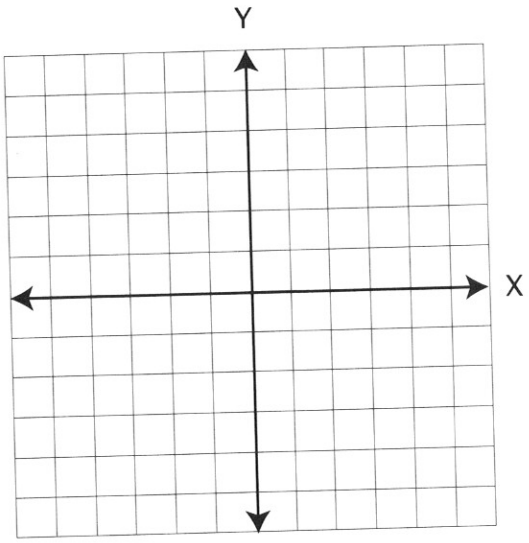
For #1-4 $-2X + Y \leq -3$

1. Graph $-2X + Y = -3$.

2. Will this be a solid line or a dotted line?

3. Choose two points, one on each side of the line.
   (___, ___) (___, ___)

4. Shade in the graph.



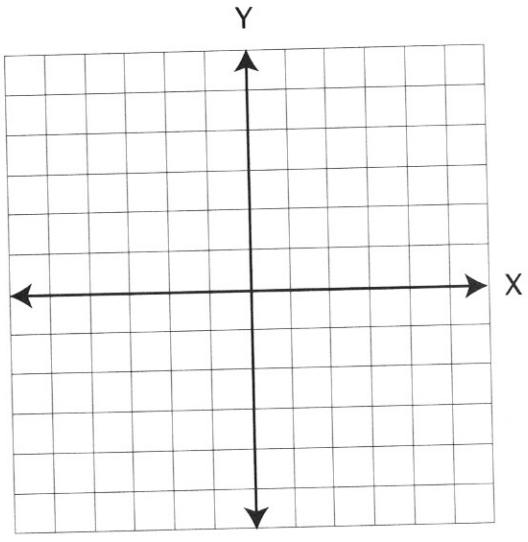
For #5-8 $3Y \leq 2X - 9$

5. Graph $3Y = 2X - 9$.

6. Will this be a solid line or a dotted line?

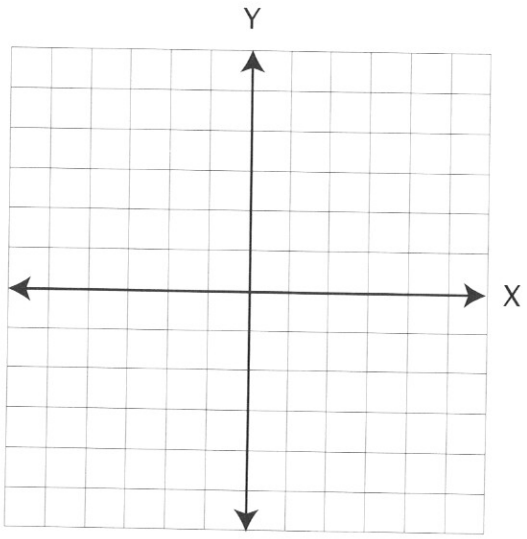
7. Choose two points, one on each side of the line.
   (___, ___) (___, ___)

8. Shade in the graph.



For #9–12 $-X + 5Y > 5$

9. Graph $-X + 5Y = 5$.



10. Will this be a solid line or a dotted line?

11. Choose two points, one on each side of the line.
(___, ___) (___, ___)

12. Shade in the graph.

Write each inequality in the slope–intercept form.

13. $-3X + Y < -5$

14. $3X - Y > 5$

15. For what operations should the sign of an inequality be reversed?

Follow the steps to graph each inequality.

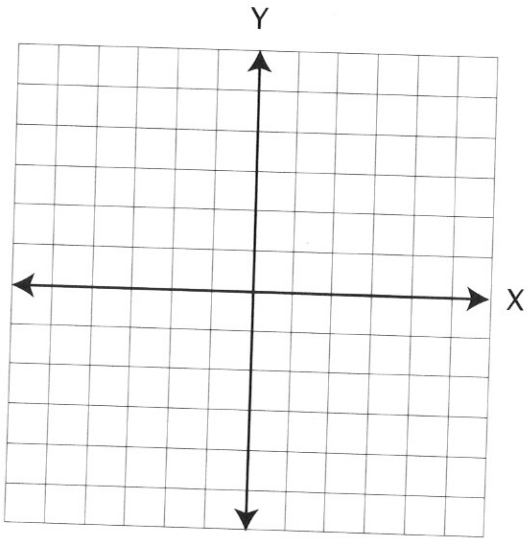
For #1-5 $-Y > -2X - 1$

1. Graph $Y = 2X + 1$.

2. Will this be a solid line or a dotted line?

3. Choose two points, one on each side of the line.
(___, ___) (___, ___)

4. Shade in the graph.



5. Is the point (3, -2) a solution of the inequality?

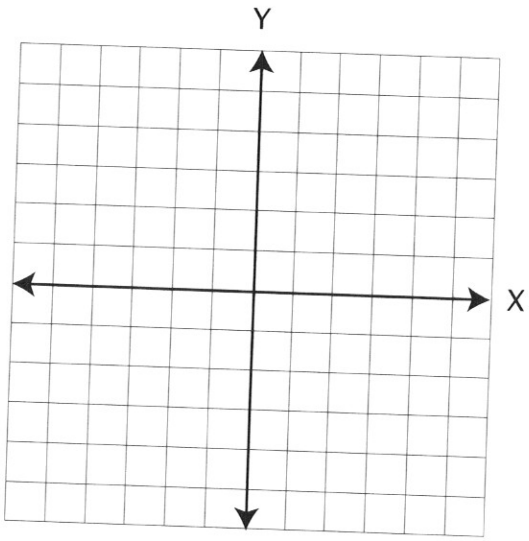
For #6-9 $Y \leq X - 3$

6. Graph $Y = X - 3$.

7. Will this be a solid line or a dotted line?

8. Choose two points, one on each side of the line.
(___, ___) (___, ___)

9. Shade in the graph.



10. For what operations must the sign of an inequality be reversed?

Answer the questions.

11. What fraction of a pound is an ounce?

12. What fraction of a ton is a pound?

13. Change to the slope-intercept form: $3X - 2Y = 5$.

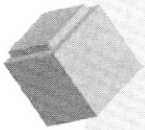
14. What is the slope of a line parallel to the line in #13?

15. What is the slope of a line perpendicular to the line in #13?

16. Write the equation for a line with a slope of 2 that passes through the point (0, -2).

17. 16% of 242 =

18. The point (-2, -2) lies in which quadrant?



QUICK REVIEW

Ratios are useful in solving some kinds of measurement problems.

EXAMPLE 1 Since 1 mile = 1.6 km, 5 miles = ____ km. $\frac{1}{1.6} = \frac{5}{?}$
Using cross-multiplication
(1)(?) = (1.6)(5) → ? = 8, so answer is 8 km.

EXAMPLE 2 Since 1 mile = 1.6 km, ____ miles = 1 km. $\frac{1}{1.6} = \frac{?}{1}$
Using cross-multiplication
(1)(1) = (1.6)(?) → 1 ÷ 1.6 = ?, so answer is .625 km.

19. Since 1 mile = 1.6 km, 10 miles = ____ km.

20. Since 1 mile = 1.6 km, ____ miles = 10 km.