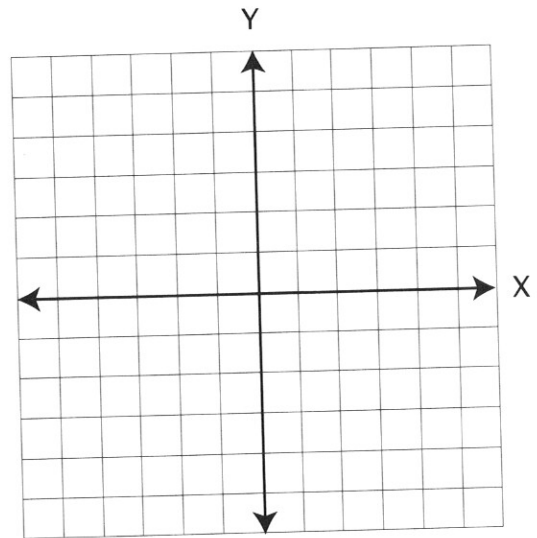LESSON PRACTICE

Follow the steps to graph each inequality.

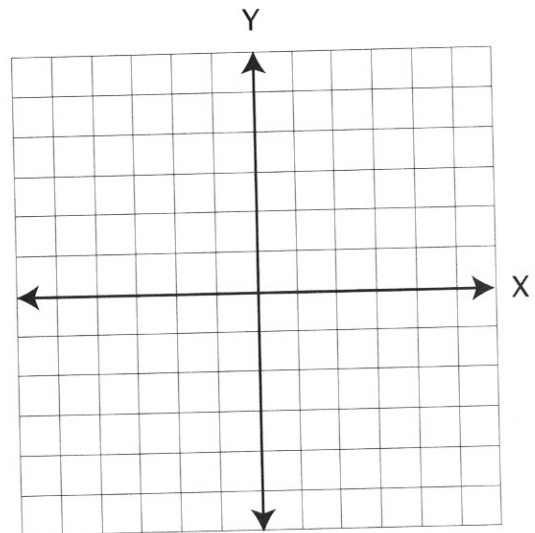**For #1-4** $-2X + Y \leq -3$

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.
   (___ , ___) (___ , ___)
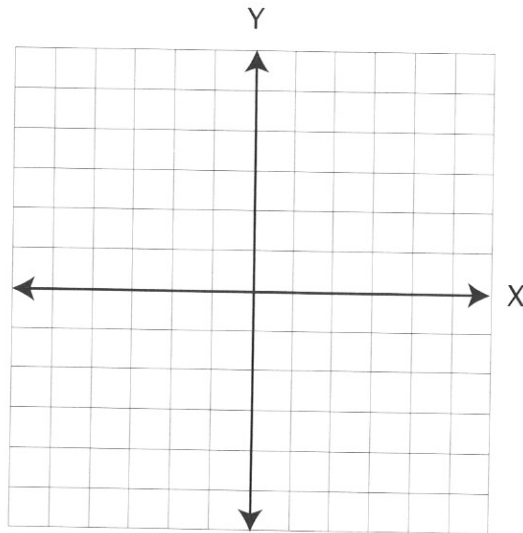
8. Shade in the graph.

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.

Y

X

Write each inequality in the slope–intercept form.
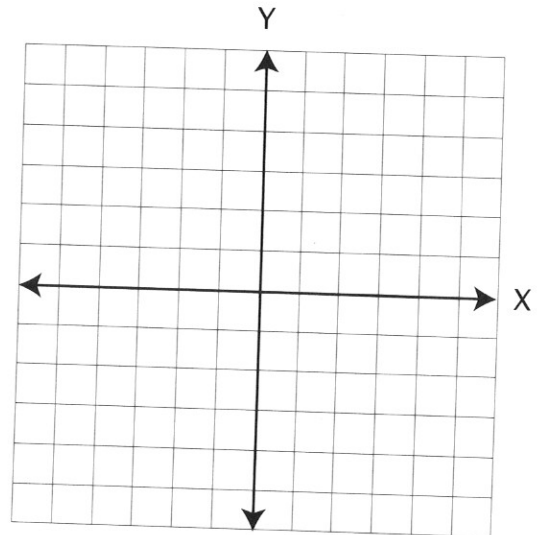
13. $-3X + Y < -5$

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?
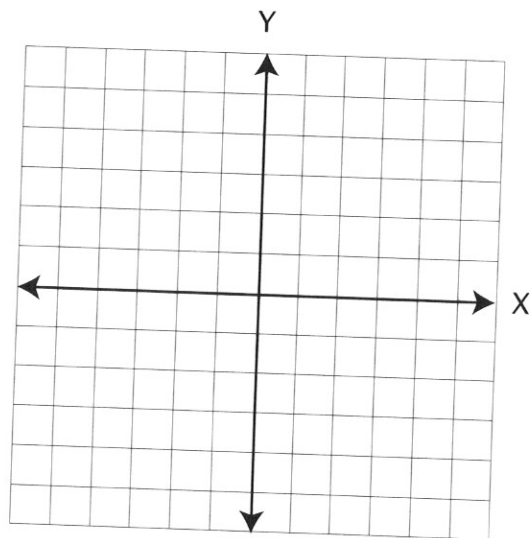
Answer the questions.

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?
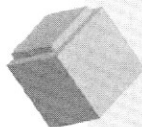
QUICK REVIEW

Ratios are useful in solving some kinds of measurement problems.

EXAMPLE 1   Since 1 mile = 1.6 km, 5 miles = _____ km.
Using cross-multiplication
$(1)(?) = (1.6)(5) \rightarrow ? = 8$, so answer is 8 km.

$$\frac{1}{1.6} = \frac{5}{?}$$

EXAMPLE 2   Since 1 mile = 1.6 km, _____ miles = 1 km.
Using cross-multiplication
$(1)(1) = (1.6)(?) \rightarrow 1 \div 1.6 = ?$, so answer is .625 km.

$$\frac{1}{1.6} = \frac{?}{1}$$

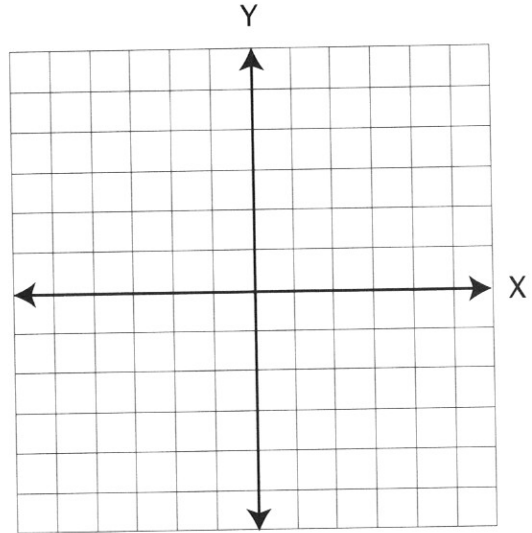19.   Since 1 mile = 1.6 km, 10 miles = _____ km.

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

ALGEBRA

SYSTEMATIC REVIEW

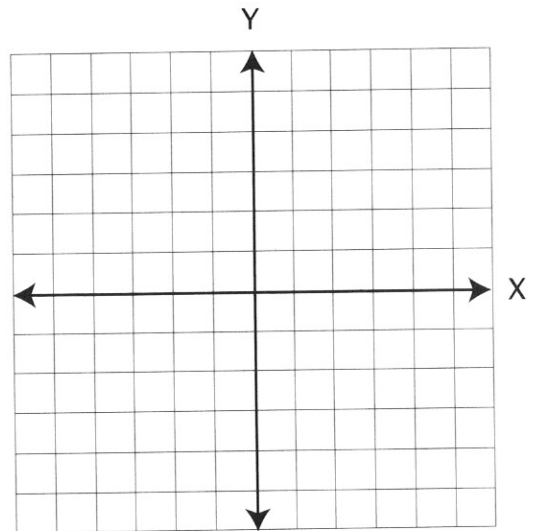Follow the steps to graph each inequality.

For #1-4   Y + 2 < 0

1. Graph Y + 2 = 0.

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. Write 4Y + 8 < 0 in slope-intercept form.

For #6-9   Y - 3 > 1/3 X - 1

6. Graph Y - 3 = 1/3 X - 1.

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. Write -3Y > -6X + 3 in slope-intercept form.

Answer the questions.

11. What fraction of an hour is a minute?

12. What percent of a week is a day?

13. Since 1 pound = .45 kg, 10 lb = ____ kg.

14. Since 1 pound = .45 kg, ____ lb = 2 kg.

15. What is the slope of a line parallel to 6Y − 4X − 3 = 0?

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

17. Write the equation for a line with a slope of −1/2 that passes through the point (1,1).

18. Change 9/25 to a decimal and to a percent.

19. Write in algebraic terms: six times a number, minus five times the number, plus eight.

20. Replace the number in #19 with 10 and find the value of the expression.