

Final Review

Draw a box-and-whisker plot for each data set.

1) Age at First Job

16 19 19 14 17 15 15
 16 17 15 13 19 17 17
 22

2) Minutes to Run 5km

37.9 19.5 37.7 35 37.9 32.5
 20.1 24.4 27.9 34 27.3 23.7
 32 27.9 39

3) Academy Awards

Movie	# Awards
The Departed	4
American Beauty	5
Argo	3
All About Eve	6
Unforgiven	4
Dances with Wolves	7

Movie	# Awards
Titanic	11
Gone with the Wind	8
The Hurt Locker	6
The King's Speech	4
Slumdog Millionaire	8

Movie	# Awards
Casablanca	3
No Country for Old Men	4
Terms of Endearment	5
Mrs. Miniver	6
Forrest Gump	6

Solve each equation.

4) $95 = 5(5 + 2k)$

5) $104 = -7n - 8(n + 2)$

6) $-3k - 4(8 - 3k) = -104$

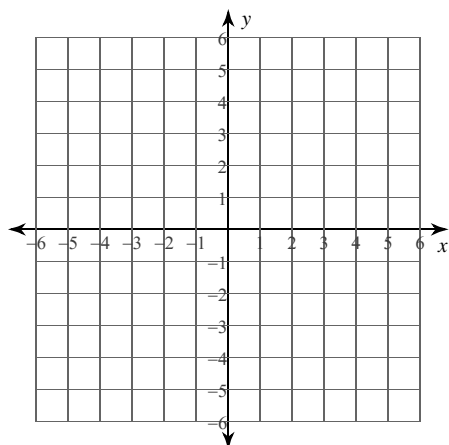
7) $7 - 8(2 - 3x) = -153$

8) $392 = 8(1 - 8n)$

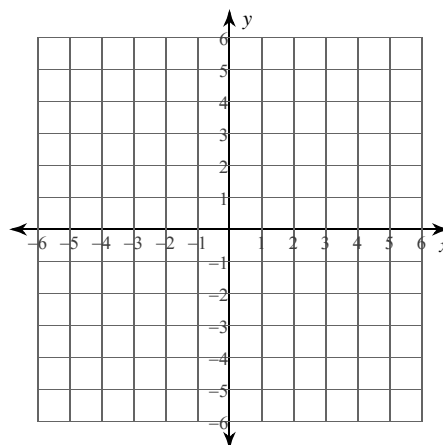
9) $92 = 8 + 6(x + 6)$

Sketch the graph of each line.

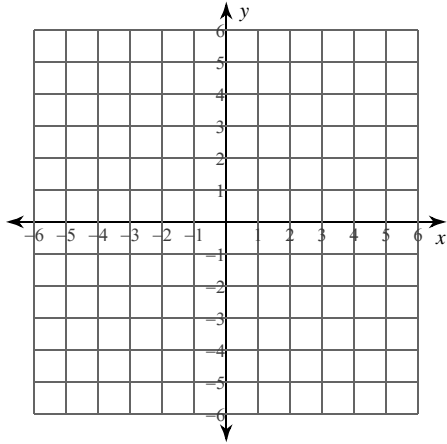
10) $y = -3$



11) $7x - 4y = 8$

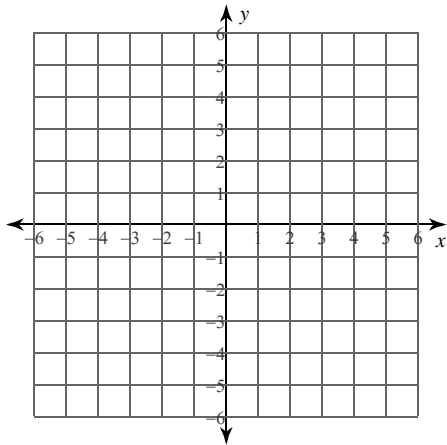


12) $4x + y = 4$

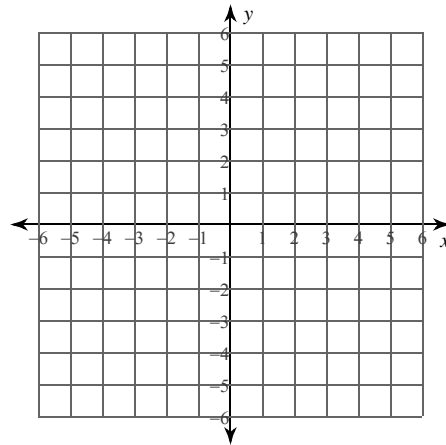


Sketch the graph of each linear inequality.

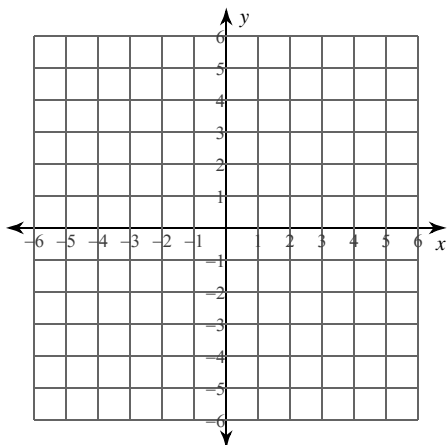
13) $y < \frac{5}{4}x + 1$



14) $y \leq \frac{1}{2}x$



15) $y \leq -\frac{1}{2}x - 3$



Solve each system by graphing.

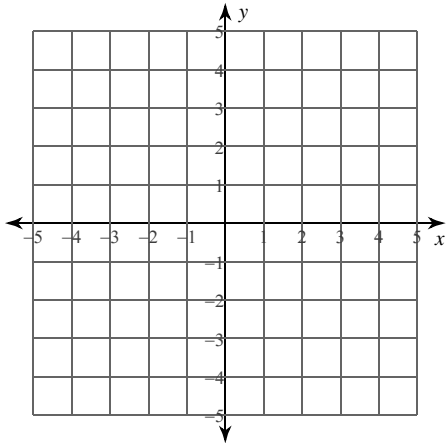
16) $y = \frac{1}{2}x + 1$
 $y = 3x - 4$

17) $y = -\frac{8}{3}x - 4$
 $y = -\frac{8}{3}x + 2$

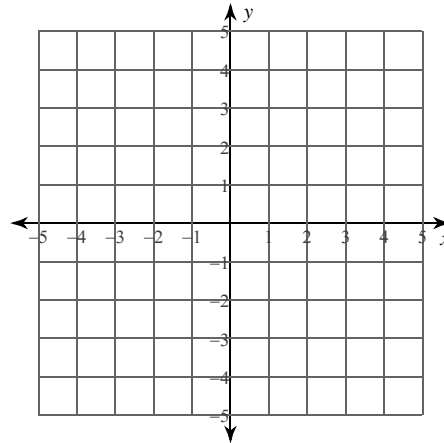
18) $x = 3$
 $y = \frac{4}{3}x - 1$

Sketch the solution to each system of inequalities.

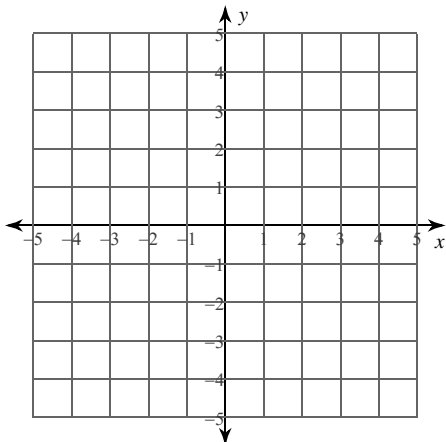
19) $y > 3x - 2$
 $y > -x + 2$



20) $y < x + 1$
 $y \leq x + 3$



21) $y > -4x + 3$
 $y \geq 2x - 3$



Evaluate each expression.

22) $(7 - 3) \div 2$

23) $2 + 6^2$

24) $5 \times 6 - 1$

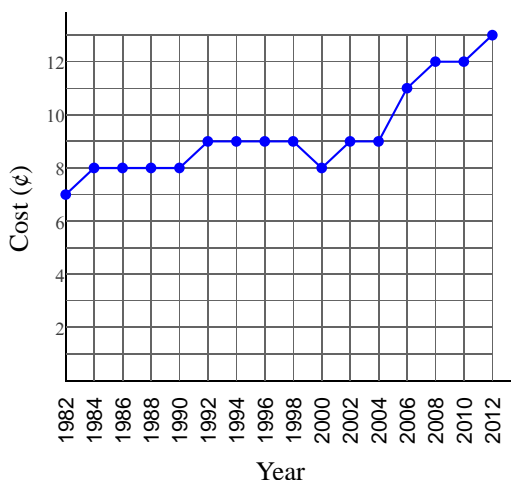
25) $16 \div 4 \times 5$

26) $12 \div 6 - 1$

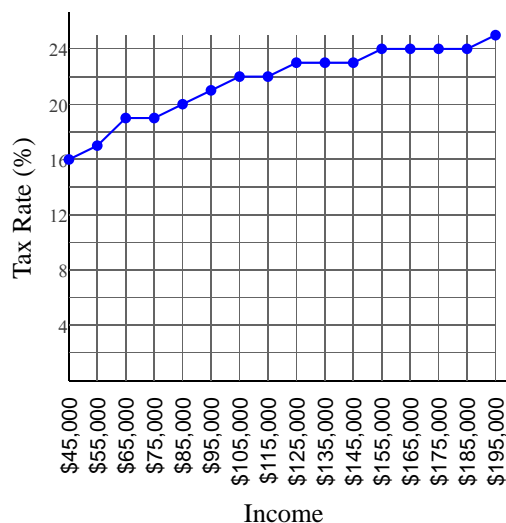
27) $(4 + 5) \times 4$

Find the median and mean for each data set.

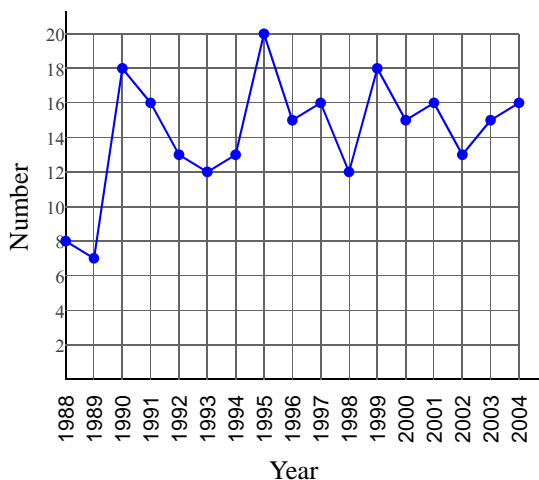
28) Cost of Electricity, per kWh



29) Federal Income Tax

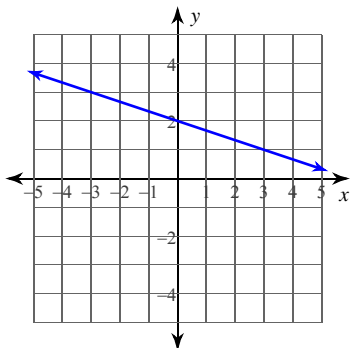


30) 7.0+ Magnitude Earthquakes



Write the slope-intercept form of the equation of each line.

31)



Write the slope-intercept form of the equation of each line given the slope and y-intercept.

32) Slope = -4, y-intercept = 3

Write the slope-intercept form of the equation of each line.

33) $x - y = -2$

34) $y + 3 = 0$

Write the slope-intercept form of the equation of the line through the given point with the given slope.

35) through: $(-3, -3)$, slope = $-\frac{1}{3}$

Write the slope-intercept form of the equation of the line through the given points.

36) through: $(0, -1)$ and $(-4, -4)$

Write the slope-intercept form of the equation of the line described.

37) through: $(-3, -4)$, parallel to $y = x - 4$

38) through: $(5, 0)$, perp. to $y = \frac{5}{2}x - 2$

39) A metal alloy weighing 6 mg and containing 36% platinum is melted and mixed with 2 mg of pure platinum. What percent of the resulting alloy is platinum?

40) For her birthday party Kayla mixed together 6 L of Brand A fruit punch and 3 L of Brand B. Brand A contains 5% fruit juice and Brand B contains 50% fruit juice. What percent of the mixture is fruit juice?

41) 3 m^3 of soil containing 25% sand was mixed into 2 m^3 of soil containing 20% sand. What is the sand content of the mixture?

Find the mean for each data set.

42) Single Family Home Prices

431,200 431,100 425,100 422,100
 443,500 443,300 427,600 435,800
 430,100 437,100 442,900 438,200
 443,700 431,000 426,500 448,600
 446,700

Find the median for each data set.

43) Large Cities

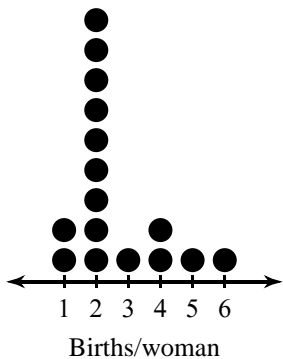
City	Population	City	Population	City	Population	City	Population
Shenzhen	10,467,400	Alexandria	4,616,625	Nanjing	4,393,857	London	8,416,535
Xiamen	3,531,347	Changsha	3,093,980	Hangzhou	3,560,391	Foshan	6,151,622
Kinshasa	9,735,000	Kabul	3,414,100	Busan	3,590,101	Hefei	3,352,076
Guangzhou	11,185,600	Kolkata	4,486,679	Dar es Salaam	4,364,541		

Find the lower quartile and upper quartile for each data set.

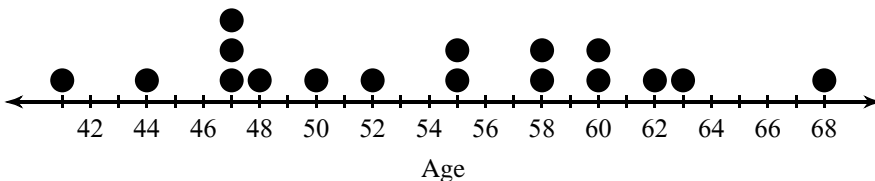
44) Campers at National Parks

Park	Tent Campers	Park	Tent Campers	Park	Tent Campers
Glen Canyon	4,432	Kings Canyon	73,424	Blue Ridge Parkway	39,814
Natchez Trace Parkway	5,192	Joshua Tree	172,008	Mount Rainier	56,871
Dinosaur	9,400	Yosemite	436,588	Cape Hatteras	40,943
Grand Teton	10	Mesa Verde	22,875	Ozark	57,532
Death Valley	51,257	Mojave	576	Bighorn Canyon	2,972

45) Birth Rate by Country

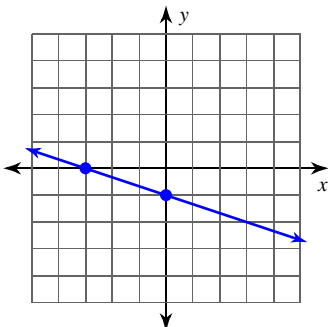


46) US Senators When Assuming Office



Find the slope of each line.

47)



Find the slope of the line through each pair of points.

48) $(-9, 1), (2, -2)$

Find the slope of each line.

49) $y = 2x$

Find the slope of a line parallel to each given line.

50) $y = -2x - 5$

Find the slope of a line perpendicular to each given line.

51) $y = x + 3$

52) The school that Amy goes to is selling tickets to a spring musical. On the first day of ticket sales the school sold 5 adult tickets and 10 student tickets for a total of \$55. The school took in \$56 on the second day by selling 10 adult tickets and 2 student tickets. What is the price each of one adult ticket and one student ticket?

53) The senior classes at High School A and High School B planned separate trips to the indoor climbing gym. The senior class at High School A rented and filled 6 vans and 7 buses with 354 students. High School B rented and filled 7 vans and 14 buses with 623 students. Each van and each bus carried the same number of students. Find the number of students in each van and in each bus.