

Final Review

Date _____ Period _____

Solve each equation.

1) $-2(-8n - 5) = 122$

2) $-2(8n - 2) - 7 = -83$

3) $-92 = 4x - 4(3x + 7)$

4) $3(6 + 4x) = 102$

5) $-(a + 3) - 7(6 + a) = -8a + 3a$

6) $8(k - 5) = 6 + 8(k - 5)$

Factor the GCF out of each expression.

7) $n^2 + 8n$

8) $3x^2 + 3x - 216$

9) $5k^2 - 85k + 350$

10) $n^2 + 5n - 14$

Solve each equation by factoring.

11) $r^2 - 3r = 0$

12) $r^2 - 3r + 2 = 0$

13) $n^2 - 5n = 0$

14) $2v^2 - 9v - 35 = 0$

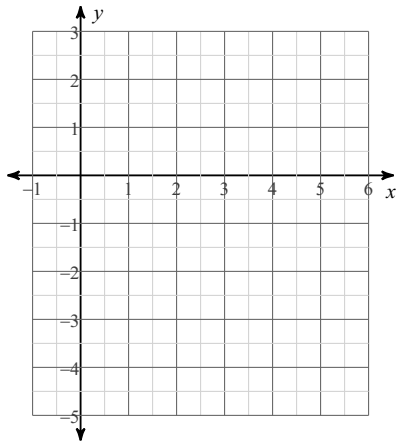
$$15) 7x^2 + 36x + 32 = 0$$

$$16) 2x^2 + 19x + 24 = 0$$

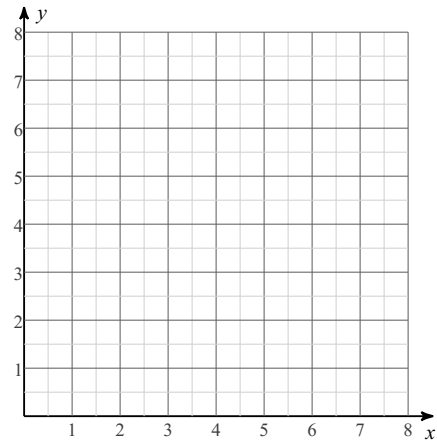
$$17) 5k^2 + 21k + 18 = 0$$

Sketch the graph of each function.

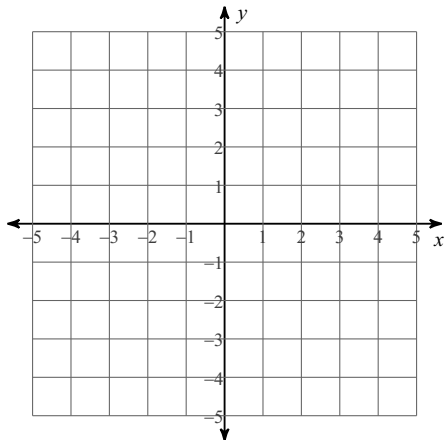
$$18) y = (x - 4)^2 - 3$$



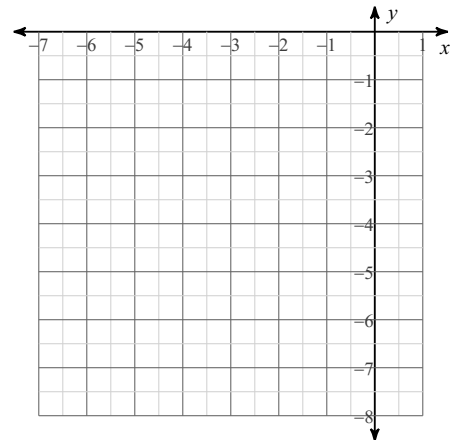
$$19) y = (x - 2)^2 + 3$$



$$20) y = -2(x - 3)^2 + 4$$



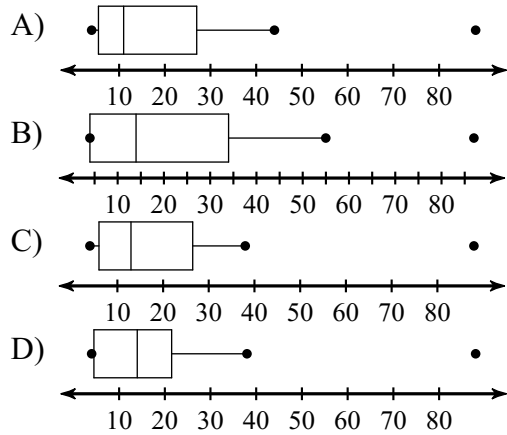
$$21) y = -(x + 3)^2 - 3$$



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

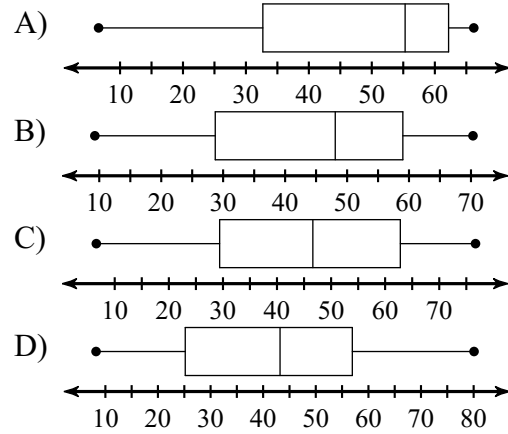
22) 2012 Summer Olympics

Country	Medals	Country	Medals
Argentina	4	New Zealand	13
Lithuania	5	Slovenia	4
Ireland	5	South Africa	6
Romania	9	Germany	44
Hungary	18	China	88
Ukraine	20	Kenya	11
Australia	35	Sweden	8
Georgia	7	Brazil	17
France	34		



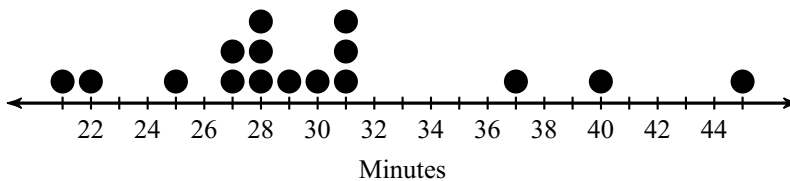
23) Annual Precipitation (Inches)

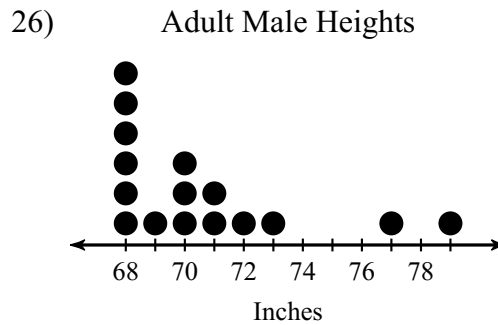
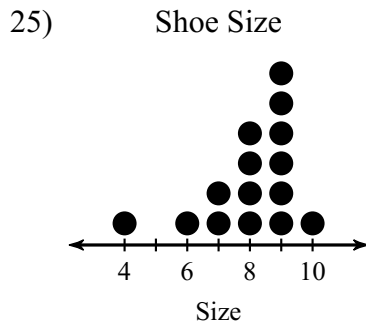
32 62.6 66.2 58 42.6
 6.6 7.6 65.2 19 59.8
 41.6 64.2 59.6 33.4 61.8
 52.6



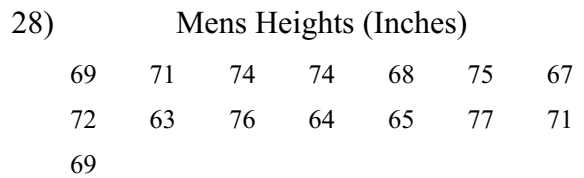
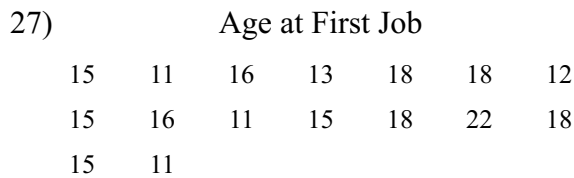
Find the median and mean for each data set.

24) Time to Run 5km





Draw a dot plot for each data set.



Using the equation of the exponential function given, answer the following questions:

$$y = -\frac{5}{4} \cdot 2^{x-1} + 1$$

29) How does it shift vertically?

30) How does it shift horizontally?

31) What is the b value?

32) What does the b value tell you about whether it is growth or decay?

33) Is this function compressed or stretched?
What value you tells you this?