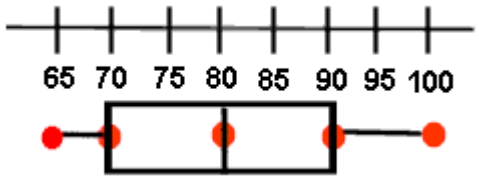
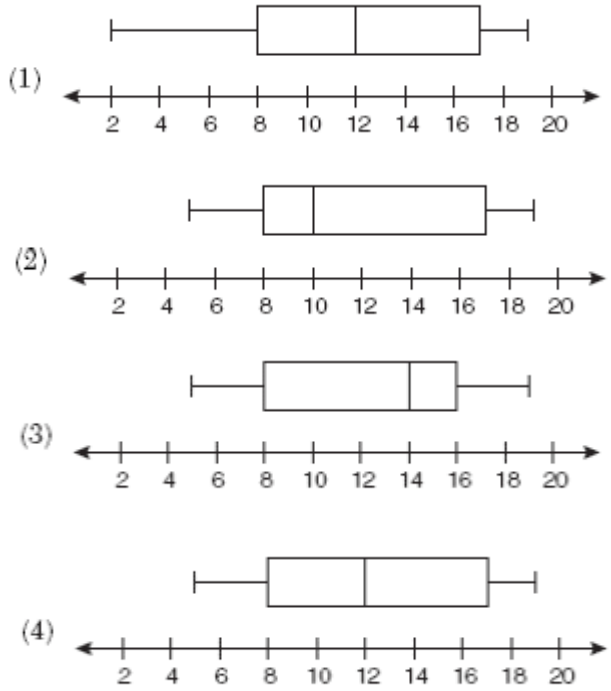
Name _____ **Date Due: Tues, April 16th**

Integrated Algebra Regents Review #4

Directions: *Choose the best answer. Answer ALL questions. Show ALL work in column 2.* ***If there is no mathematical work to be shown, write an explanation or definition to support your answer!*** *This counts as a quiz grade!!!*

1. If $t = -3$, then $3t^2 + 5t + 6$ equals [1] -36 [2] -6 [3] 6 [4] 18	
2. In a survey of 400 teenager shoppers at a large mall, 240 said they shopped at Abernathy's, 210 said they shopped at Bongo Republic, and 90 said they shopped at both stores. How many of the teenage shoppers surveyed did not shop at either store? [1] 40 [2] 50 [3] 60 [4] 70	
3. Mr. Goldberg asked his son to give an example that illustrates the distributive law. Which of the following equations can his son use to demonstrate the distributive law? [1] $a(b+c) = ab + ac$ [2] $(a+b)+c = a+(b+c)$ [3] $(ab)c = a(bc)$ [4] $ab + ac = ac + ab$	
4. Find the median: 5, 15, 10, 15, 5, 10, 10, 20, 25, 15. [1] 10 [2] 12.5 [3] 15 [4] no median	

5. Andy has grades of 84, 65, and 76 on three math tests. What grade must he obtain on the next test to have an average of exactly 80 for the four tests? [1] 80 [2] 93 [3] 95 [4] 98	
6. Which situation is an example of bivariate data? [1] Ms. Saleem keeps a list of the amount of time her daughter spends on her social studies homework. [2] Mr. Benjamin tries to see if his students' shoe sizes are directly related to their heights. [3] Mr. DeStefan records his customers' best video game scores during the summer. [4] Mr. Chan keeps track of his daughter's algebra grades for the quarter.	
7. According to the box-and-whisker plot shown below, what is the third quartile value?  [1] 70 [2] 80 [3] 90 [4] 100	
8. Here is data regarding the students in the senior class: 578 students, 236 honor students, 150 scholarship winners, 51% male. This data can be described as being [1] quantitative [2] qualitative [3] both [4] neither	

9. The data set 5, 6, 7, 8, 9, 9, 9, 10, 12, 14, 17, 17, 18, 19, 19 represents the number of hours spent on the Internet in a week by students in a mathematics class. Which box-and-whisker plot represents this data?  	
10. A tally was made of the number of times each color of crayon was used by a kindergarten class. Which measure of central tendency should the teacher use to determine which color is the favorite color of her class? [1] mean [2] mode [3] median [4] range	
11. Solve for x: $8x + 9 = 5x + 6$ [1] -1 [2] 1 [3] 5 [4] -3/13	

12. What is the slope of the graph of the equation $y = 2x - \frac{3}{2}$? [1] $\frac{1}{2}$ [2] 2 [3] $\frac{3}{2}$ [4] $2x$	
13. Solve for *x*: $\frac{x}{4} + 7 = 5$ [1] 8 [2] -8 [3] 3 [4] $-\frac{1}{2}$	
14. Two cubes whose faces are numbered 1 through 6 are tossed. What is the probability that both cubes show the same number? [1] 36 [2] $\frac{6}{36}$ [3] $\frac{1}{36}$ [4] $\frac{5}{6}$	
15. Express $\frac{x}{2} + \frac{2x}{3}$ as a single fraction in lowest terms. [1] $\frac{5x}{6}$ [2] $\frac{7x}{6}$ [3] $\frac{3x}{5}$ [4] *x*	

16. Express $\sqrt{18} + 5\sqrt{2}$ in simplest radical form. [1] $8\sqrt{2}$ [2] $2\sqrt{2}$ [3] $6\sqrt{3}$ [4] $6\sqrt{18}$	
17. If the number 0.00048 is written in the form 4.8×10^n, what is the value of n? [1] 4 [2] -4 [3] 5 [4] -5	
18. For which value of x is the expression $\frac{1}{x-9}$ undefined? [1] -9 [2] 0 [3] 3 [4] 9	
19. The product $\left(\frac{2a^3}{5b}\right)\left(\frac{3a^2}{7b}\right)$ is [1] $\frac{5a^2}{12b^2}$ [2] $\frac{5a^6}{12b}$ [3] $\frac{6a^5}{35b^2}$ [4] $\frac{6a^6}{35b}$	
20. Factor: $y^2 - 100$ [1] $(y - 10)^2$ [2] $(y - 10)(y - 10)$ [3] $(y + 10)(y + 10)$ [4] $(y + 10)(y - 10)$	