

Correctly answer each question. Bonus questions are not required, but will add extra credit points.

- 1) In the following data set, find the MEAN: \_\_\_\_\_, MEDIAN: \_\_\_\_\_, MODE(s) (if any): \_\_\_\_\_  
 LOWER QUARTILE: \_\_\_\_\_ UPPER QUARTILE: \_\_\_\_\_ RANGE: \_\_\_\_\_  
 OUTLIERS (if any) \_\_\_\_\_

120 1,180 1,120 1,120 1,170 1,160 1,170 1,170 1,100 990 1,170 1,120 1,190 1,100 1,970

\_\_\_\_\_ 2) In the BAR graph at right, how many students got an A or a B on the quiz?

\_\_\_\_\_ 3) In the graph at right, how many more students got As than got Ds?

\_\_\_\_\_ 4) Simplify:  $10 - 1(8 - 2)$

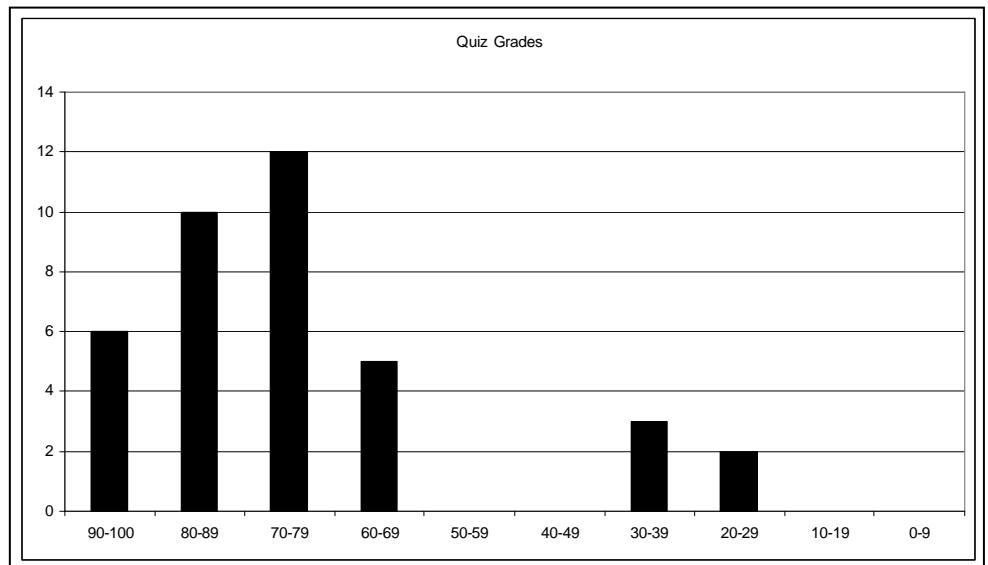
In questions 5-7, use these values for x, y and z:

$x = 1.5, y = 6.5, z = 0$

\_\_\_\_\_ 5)  $(x)^3 + (y)^3$

\_\_\_\_\_ 6)  $z + y(10)$

\_\_\_\_\_ 7)  $-y + x$



\_\_\_\_\_ 7b)  $25^{(x-1)}$

\_\_\_\_\_ 7c) Store 45 in x. Store -5 in y. Find  $\frac{x}{y}$

\_\_\_\_\_ 8) Round  $\sqrt{21}$  to the nearest 100<sup>th</sup>. \_\_\_\_\_ 8a) \*Round  $\sqrt{-4}$  to the nearest 1000<sup>th</sup>

\_\_\_\_\_ 9) Divide  $3 \div 22$  and round your answer to the nearest 10<sup>th</sup>.

**SOLVING EQUATIONS AND INEQUALITIES.** Solve each equation. Show your steps! show your solution on the number line above the problem. (In the equations with fractions, don't forget to multiply by the reciprocal!)

10)  $\frac{2}{5}x + 11 = 23$

11)  $\frac{1}{8}x + 9 = -2$

12)  $-4x - 6 = 2$

\_\_\_\_\_ 14) You scored a 99 on the first TWO QUIZZES. What would your new average be if you scored a 89 on the THIRD quiz? ( \_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_ ) ÷ \_\_\_\_\_ = \_\_\_\_\_

15) YES \_\_\_ NO \_\_\_\_\_ Lisa rounded 7.96 and 9.95 and multiplied them. Her estimated answer was 70. Was that a good estimate? Explain.

\_\_\_\_\_ 16) If a herpetologist collected 50 tortoises and 11 of them were over 50 inches in length, what percent of the tortoises were over 50 inches in length?

\_\_\_\_\_ 17) If you multiply using the DISTRIBUTIVE PROPERTY in this expression:  $3(-2x+1)$  which of the following would you get?

- a)  $a) -6x+4$     b)  $6x+3$     c)  $-6x+3$     d)  $6x-3$



\_\_\_\_\_ 18) Simplify  $\left(\frac{1}{3}\right)^3$

\_\_\_\_\_ 18b) Simplify  $|25 - 30|$     18c) The straight lines mean “ \_\_\_\_\_ ”

\_\_\_\_\_ 19) Which of the following shows this expression simplified?  $14x+90-17x-30$

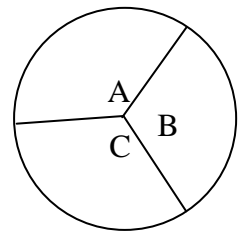
- a)  $3x+60$     b)  $-3x+60$     c)  $31x+60$     d)  $31x+120$

\$ \_\_\_\_\_ 20) What is the sales tax (\$) on a \$25.00 purchase if the tax rate is 8.25%?

\_\_\_\_\_ 22) Use   to find the remainder in this division problem:  $29 \overline{)4117}$

\_\_\_\_\_ 23) In the circle at right, Angle A is  $110^\circ$ , and Angle C is  $120^\circ$ . Find the measure of Angle B.

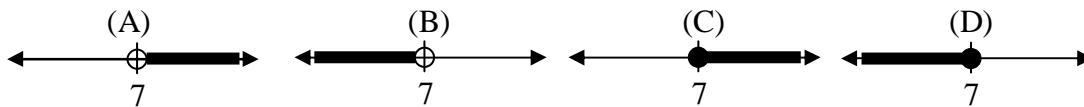
\_\_\_\_\_ 24) In the circle at right, if Angle A is  $110^\circ$ , what percent of the circle is that? Hint: Divide 110 by 360 and change to %.



\_\_\_\_\_ 25) Find the Fahrenheit temperature if the Celsius temperature is  $-40^\circ$ .

Use the formula  $F = \frac{9}{5}C + 32$

\_\_\_\_\_ 26) In the inequality  $x > 7$  which of the following would be the correct graph of the solution?



27) Convert each fraction to a percent by dividing the top number by the bottom number and moving the decimal point 2 places to the right. Show repeating decimals like this. If your display says  $8.1111111 = 8.\bar{1}$

$\frac{5}{4}$  \_\_\_\_\_  $\frac{4}{3}$  \_\_\_\_\_  $\frac{2}{5}$  \_\_\_\_\_  $\frac{7}{6}$  \_\_\_\_\_  $\frac{9}{10}$  \_\_\_\_\_



28) Convert each percent to a REDUCED fraction: Type each fraction. Press the convert button

$12\frac{1}{2}\%$  \_\_\_\_\_  $0.5\%$  \_\_\_\_\_  $45\%$  \_\_\_\_\_  $16\frac{2}{3}\%$  \_\_\_\_\_