

Name: _____

Date: _____

GREEN Chapter 7 Test (A)

Write an equation to match the word sentence. (1pt each)

Answers

1) The sum of a number a and 3 is 9.

$$a + 3 = 9$$

1) $a + 3 = 9$

2) The product of a number b and 18 is 90

$$18b = 90$$

2) $18b = 90$

3) The quotient of a number c and 5 is 20

$$\frac{c}{5} = 20$$

3) $\frac{c}{5} = 20$

4) 25 is 4 less than a number d

$$25 = d - 4$$

4) $25 = d - 4$

Solve the equation. (2pts each)

5) $e - 3.4 = 18.7$

$$+3.4 \quad | \quad +3.4$$

$$e = 22.1$$

5) $e = 22.1$

6) $f + 1\frac{2}{3} = 4\frac{1}{5}$

$$-1\frac{2}{3} \quad | \quad -1\frac{2}{3}$$

$$\begin{array}{r} 3 \swarrow \\ 4 \quad | \quad \frac{1}{5} \times \frac{3}{3} = \frac{3}{15} \quad 15 + 3 = \frac{18}{15} \\ -1 \quad | \quad \frac{2}{3} \times \frac{5}{5} = \frac{10}{15} \\ \hline 2 \quad | \quad \frac{8}{15} \end{array}$$

6) $f = 2\frac{8}{15}$

Solve the equation. (2pts each)

7) $5g = 70$

$$\frac{\div 5}{\div 5} \quad | \quad \frac{\div 5}{\div 5}$$

$$g = 14$$

7) $g = 14$

8) $40 = \frac{h}{2.5}$
 $\frac{\times 2.5}{\times 2.5} \quad | \quad \frac{\times 2.5}{\times 2.5}$

$$90 = h$$

8) $h = 90$

Tell whether the ordered pair is a solution of the equation. (1pt each)

9) $y = x + 11$ (4, 13)

$$13 = 4 + 11$$

$$13 = 15 \quad \text{NO}$$

9) No

10) $y = 6x$ (8, 48)

$$48 = 6(8)$$

$$48 = 48 \quad \text{YES}$$

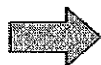
10) YES

Write and graph an equation in two variables that shows the relationship between time and distance.

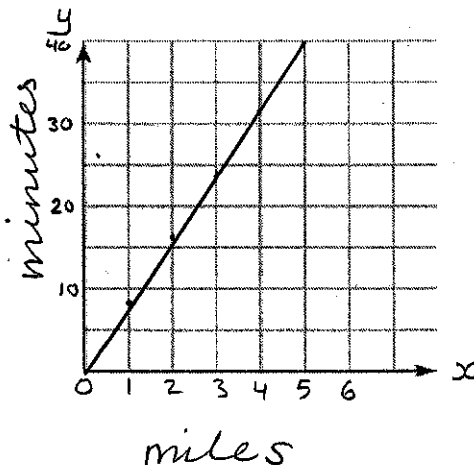
11)



Moves 1 mile
in 8 minutes.



miles x	minutes y
0	0
1	8
2	16
3	24
4	32



11) $y = 8x$

Write the word sentence as an inequality. (1pt each)

12) A number j is least 10.

$$j \geq 10$$

$$12) \underline{j \geq 10}$$

13) 15 is more than number k

$$15 > k$$

$$13) \underline{15 > k}$$

14) Twice a number m is less than 3.

$$2m < 3$$

$$14) \underline{2m < 3}$$

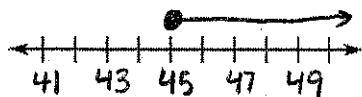
15) A number n is no more than 18.

$$n \leq 18$$

$$15) \underline{n \leq 18}$$

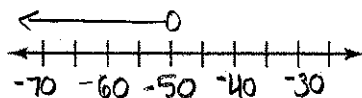
Graph the solutions of each inequality. (1pt)

16) $p \geq 45$



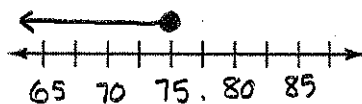
16) see left

17) $q < -50$



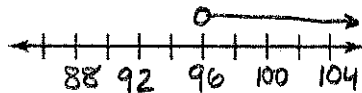
17) see left

18) $r \leq 75$



18) see left

19) $t > 96$

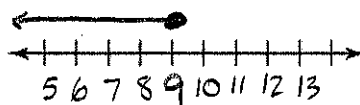


19) see left

Solve the inequality, then graph. (2pts)

20) $u - 7 \leq 2$

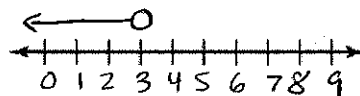
$$\begin{array}{r} +7 \quad +7 \\ \hline u - 7 \leq 2 \\ \hline u \leq 9 \end{array}$$



$$20) \underline{u \leq 9}$$

21) $\frac{v}{3} < 1$

$$\begin{array}{r} \times 3 \quad \times 3 \\ \hline \frac{v}{3} < 1 \\ \hline v < 3 \end{array}$$



$$21) \underline{v < 3}$$

22) A mobile phone plan has a base fee of \$50 per month. The monthly cost increases by \$10 for every gigabyte of data used. Write and graph an equation in two variables that represents the total monthly cost of the plan.

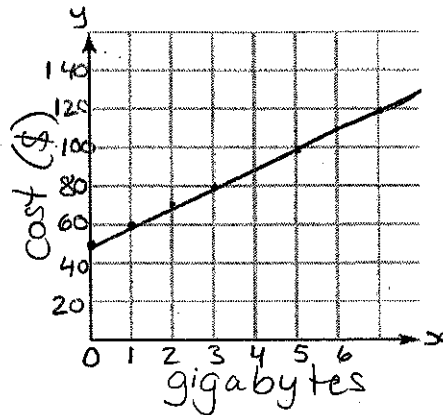
22) see left

Equation:

$$y = 50 + 10x$$

or $y = 10x + 50$

x	y
0	50
1	60
2	70
3	80



23) A disc will hold up to 62 minutes of music. The songs on the disc are 24 minutes long altogether. Write and solve an inequality to find how many more minutes of music you could add to the disc.

23) see left

$$62 \geq 24 + x$$

$$\begin{array}{r} -24 \quad | \quad -24 \\ \hline \end{array}$$

$$38 \geq x$$

Inequality: $x \leq 38$

24) An acting class divides into 6 teams that each have at most 4 students.

a. Write and solve an inequality to represent the number of students in the class.

$$\begin{array}{r} \frac{x}{6} \leq 4 \\ \times 6 \quad | \quad \times 6 \\ \hline x \leq 24 \end{array}$$

Inequality: $x \leq 24$

b. Each team has at least two students. Could there be 20 students in the class? Explain why or why not.

Yes, there could be 20 students in the class because if there are 6 teams and they have at least 2 students in each group there are a minimum of 12 students. If the groups have at most 4 students then there can be a maximum of 24 students. 20 students falls in this range so it is a solution to the number of students in the class.