Alg 2A Review Ch1 & Sec 2-5 Fall 2016

Solve for the variable indicated. State restrictions on the the variables.

1. $Q(M-Y)+K=R$ Solve for M

2. $\frac{CH-A}{W}+E=G$ Solve for H

3. $\frac{CQ+B}{A}=B-GT$ Solve for B

4. $CD-M=\frac{QR+G}{Q}$ Solve for Q

Solve each inequality.

5. $-13 \le -4x+7 < 29$

6. $6(R-5)+40 \ge 4R-9+2R-1$

7. $-4x+13+6x \le 2(x-5)+8$

Sate the solution to eac compound inequality. Give your answer as a single statement, if possible.

8. $4-3x<-32$ *OR* $x \ge 10$

9. $y<3$ *AND* $y>6$

10. $m \ge -1$ *AND* $m<5$

11. $H \le 2$ *AND* $H \le 5$

12. $c \ge 4$ *OR* $c<8$

13. $M<0$ *OR* $M \ge 2$

For 14 to 16, evaluate for $c=-8$ $d=6$ $e=16$ $g=-36$

14. $g^2-|e-c|$

15. $-c-2d^2$

16. $-|g|-d|c-e|$

For 17 to 19, simplify each expression. For expressions in only one variable, write answer in Standard Form.

17. $4x(x^2+3x-1)-8x+13x^2-2(x^2-6x+7)-15$

18. $9a^2b+3b^2a-15a^2b^2+7ab^2-a^2b^2+6a^2b-5ab$

19. $\frac{2}{9}(27D+54)-7D-4(D-5)-37$

20. State ALL the subset(s) of the Real Numbers to which each belongs.

a) $-\sqrt{784}$ b) $\frac{36}{24}$ c) -98.6 d) $\sqrt{37}$ e) $\frac{156}{13}$

21. The perimeter of a rectangle is 98 cm. The length is one less than four times the width. Write and solve an equation to find the dimensions of the rectangle.

Solve each.

22. $|4x-5|+1=19$

23. $|x+7|>20$

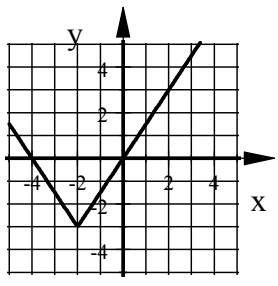
24. $|2x-7| \le 11$

25. $|x+5|=-2x+1$

26. Six consecutive multiples of 3 have a sum of -477. Write and solve an equation to find these numbers.

27. The sides of a triangle have a ratio of $12:15:19$. The perimeter of the triangle is 345 ft. Write and solve an equation to find the lengths of the three sides.

28. Graph this Absolute Value Function. $y=-3|x-1|+4$



29. Write the equation of this graph

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For 1 to 4 there are other possible answers. If you aren't sure your answer is correct just ask me.

1. $\frac{R-K}{Q}+Y$ OR $\frac{R-K+QY}{Q}$ $Q \neq 0$ 2. $\frac{W(G-E)+A}{C}$ $C \neq 0, W \neq 0$

3. $\frac{CQ+AGT}{A-1}$ OR $\frac{-CQ-AGT}{1-A}$ $A \neq 0, A-1 \neq 0 or A \neq 1$

4. $Q = \frac{G}{CD-M-R}$ $Q \neq 0, CD-M-R \neq 0$

5. $5 \geq x > -5.5$ which can be written: $-5.5 < x \leq 5$ 6. All Real Numbers 7. No Solution

8. $x \geq 10$ 9. No Sol 10. $-1 \leq m < 5$ 11. $H \leq 2$

12. All real numbers 13. $M < 0$ OR $M \geq 2$

14. 1272 15. -64 16. -180

17. $4x^3 + 23x^2 - 29$ 18. $-16a^2b^2 + 15a^2b + 10ab^2 - 5ab$ 19. $-5D - 5$

20. a. Rational, Integer b. Rational c. Rational d. Irrational e. Rational, Integer, Whole, Natural.

21. Eqs: $98 = 2L + 2W; L = 4W - 1$ Dimesions: 39 x 10 or 10 x 39

22. $x = -\frac{13}{4}, \frac{23}{4}$ 23. $x < -27$ or $x > 13$ 24. $-2 \leq x \leq 9$ 25. $x = -\frac{4}{3}$ (the other solution is extraneous)

26. Eq: x+x+3+x+6+x+9+x+12+x+15= -477 $\#'s$ are: $-72, -75, -78, -81, -84, -87$

27. Eq: 12x+15x+19x= 345 side lengths are: $90, 112.5, 142.5$

28. 29. $y = \frac{3}{2}|x+2| - 3$