SHOW ALL WORK ON THIS TEST OR ON SEPARATE PAPER. Circle Answers.

PART 1: (2 points each) Circle your answers!

In 1 - 15, give the value.

1.
$$7 + 3 \cdot 5$$

$$2. \qquad 20 \div 4 \bullet 5$$

$$3. \qquad 5 \bullet 2^2$$

4.
$$8+2 \cdot 3^2-5$$

5.
$$(-12) + (-8)$$

6.
$$(-15) + 5$$

8.
$$(-36) \div 6$$

10.
$$12 \div 0$$

11.
$$0 \div 12$$

12.
$$(-3)^3$$

13.
$$(-1)^8$$

14.
$$3^2 + 4^2 + 5^2$$

15.
$$(-2)^2 + (-2)^3 + (-2)^4$$

In 16 - 19, simplify and combine like terms:

16.
$$(-8x) + (-15x) + 20x$$

17.
$$x^2 - 8x - 14y - 5x^2 + 13x + 5y$$

18.
$$5(5x-4y)+4(2y-x)$$

19.
$$4(7x+4)-3(6x-4)$$

In 20 - 22, given x = -2 and y = 5, evaluate the following expressions.

20.
$$x^2 + 3xy + y^2$$

21.
$$x^2 - y^2$$

$$x^2 + 3xy + y^2$$
 21. $x^2 - y^2$ 22. $-x^2 + 2xy$

PART 2: (4 points each, partial credit) In 23 - 27, solve the equations.

23.
$$5x + 16 = 36$$

$$24. 12x - 20 = -3x + 25$$

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25.
$$6(x-4) = 10 + 2(7-x)$$

$$6(x-4) = 10 + 2(7-x)$$
 26. $6-3(2x+6) = 2(3x+1) - 2$

27.
$$-x(x-4) = 6(x-1) - (x^2-20)$$

In 28 - 31, solve the inequalities; graph on a number line.

28.
$$4x + 6 \ge x - 12$$

29.
$$-4x < 12$$

30.
$$-6 < x-4 \le 2$$

31.
$$-12 \le 6 - 3x < 9$$

In 32 - 36, give equations and solve the word problems.

32. Three times a certain number is equal to the number plus 12. Find the number.

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33. Find three even consecutive numbers such that the first, plus twice the second, plus three times the third is equal to 100.

34. The length of a rectangle is 50 meters less than twice the width. The perimeter of the rectangle is 500 meters. Find the length and the width of the rectangle.

35. A box contains 20 coins in quarters and dimes worth \$3.00. How many of each coin are there?

36. A sum of money consists of nickels, dimes, and quarters worth \$8.00. There are three times as many nickels as quarters, and the number of dimes is 4 less than the number of nickels. How many of each coin are there?

BASIC ALGEBRA EXAM 1G Solutions

1.
$$7+3.5$$
 2. $20\div4.5$ 3. 5.2^{2} 4. $8+2.3^{2}-5$ 5. $(12)+(8)$ 6. $(-15)+5$ 7+15 5.5 5.4 $8+2.9-5$ 20 FID

17.
$$\chi^{2}=8\chi-14y-5\chi^{2}+13\chi+5y$$
 18. $5(5\chi-4y)+4(2y-\chi)$ 19. $4(7\chi+4)-3(6\chi-4y)$

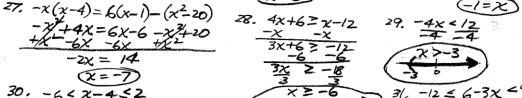
$$-4\chi^{2}+5\chi-9y$$

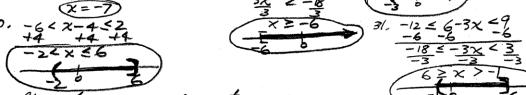
$$25\chi-25y+8y-4\chi$$

$$21\chi-12y$$

$$(10\chi+28)$$

20,
$$x^{\frac{2}{3}} x y + y^{\frac{1}{2}}$$
21, $x^{\frac{2}{3}} y^{\frac{2}{3}}$
22, $-x^{\frac{2}{3}} + 2x y$
23, $5x + 16 = 36$
4 - 30 + 25
4 - 25
-21
21, $x^{\frac{2}{3}} y^{\frac{2}{3}}$
22, $-x^{\frac{2}{3}} + 2x y$
23, $5x + 16 = 36$
5 $x = 20$





35. No Gins EA VALUES	6X+16=100	X=100 m. W +300
P X 25 25X	6x = 84	Marins FA VALUES
D 20-x 10 10 (20-x)	(x+2=16)	× 25 25× 70×-40=800
$\frac{305}{25x + 200 - 40x} = 30$	14+2(16)+3(18)=100	X-PQ 3.00
1.75 Q 15x = 105		(3x-4=327) 3, 20
3.00 (x=7Q 20	-x = /3D	X+15X+30X-40=800 #800