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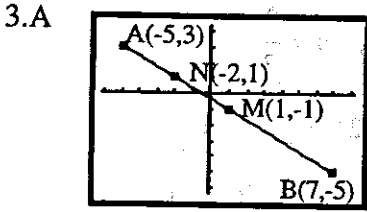
Answer Sheet for Test "Algebra I Individual 99", 8/27/98

<u>Chapter/ Question</u>	<u>Test Question</u>	<u>Correct Answer</u>
1-85	1	D
1-80	2	B
1-87	3	A
1-90	4	D
1-75	5	C
1-72	6	A
1-76	7	A
1-73	8	B
1-83	9	A
1-68	10	B
1-66	11	E
1-69	12	D
1-64	13	C
1-89	14	D
1-91	15	D
1-70	16	C
1-67	17	C
1-79	18	B
1-63	19	C
1-77	20	B
1-92	21	A
1-78	22	E
1-65	23	A
1-82	24	D
1-84	25	B
1-81	26	A
1-88	27	B
1-74	28	B
1-86	29	E
1-71	30	C

1.D $\frac{2}{3}(6x-3) = x+5(x+8)-2x$
 $4x-2 = x+5x+40-2x$
 $4x-2 = 4x+40$

No Solution

2.B $\frac{3}{8} = \frac{x}{9}$
 $x = \frac{27}{8} = 3\frac{3}{8}$

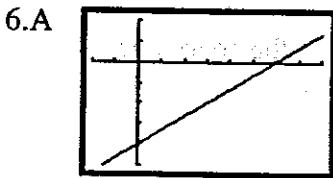


$M = \left(\frac{-5+7}{2}, \frac{3+(-5)}{2}\right) = (1, -1)$

$N = \left(\frac{-5+(-2)}{2}, \frac{3+1}{2}\right) = (-2, 1)$


4.D $ay - b = c + dy$
 $ay - dy = c + b$
 $y(a - d) = c + b$
 $y = \frac{c + b}{a - d}$


5.C $7w + d + \frac{h}{24}$



slope = $m = \frac{4}{6} = \frac{2}{3}$
 y -intercept = $b = -4$
 $y = \frac{2}{3}x - 4$
 $3y = 2x - 12$
 $2x - 3y = 12$

7.A Since the graph shows that Car A has a greater distance than Car B at any time > 0 , Car A must be traveling at a greater speed.

8.B  Area = 9 square inches
 3 in.

 Area = 225 square inches
 1.25 ft. = 15 in. $9:225 = 1:25$

9.A $\frac{(a^{-2}b^4)^{-6}}{(a^4b^{-8})^3} = \frac{a^{12}b^{-24}}{a^{12}b^{-24}} = 1$

10.B $B + 12 = P$
 $P = B + 12$
 Pablo's score is 12 more than Bob's.

11.E $A_{circle} = \pi r^2 = 8\pi$
 so $r = \sqrt{8}$

side = $s = 2r = 2\sqrt{8}$

$A_{square} = s^2 = (2\sqrt{8})^2 = 32 \text{ un}^2$

12.D After 1st Bounce $48 \cdot \frac{2}{3} = 32$
 After 2nd Bounce $32 \cdot \frac{2}{3} = \frac{64}{3}$
 After 3rd Bounce $\frac{64}{3} \cdot \frac{2}{3} = \frac{128}{9}$

13.C $A = \pi r^2$
 $A = \pi(3r)^2$
 $A = 9\pi r^2$

Multiplied by 9

14.D Find intercepts
 $x - 2y = 4$
 $x = 0 \Rightarrow -2y = 4$
 $y = 0 \Rightarrow x = 4$
 Line passes through the points (0, -2) and (4, 0)

15.D $5w - (w - 8) > 9 + 3(2w - 3)$
 $5w - w + 8 > 9 + 6w - 9$
 $4w + 8 > 6w$
 $8 > 2w \Rightarrow w < 4$

16.C $\frac{a}{b} = \frac{c}{d}$
 $\frac{a}{b} \left(\frac{d}{a}\right) = \frac{c}{d} \left(\frac{d}{a}\right)$
 $\frac{d}{b} = \frac{c}{a}$

$$17.C \quad \frac{x+y}{2} = \frac{x+y+z}{3}$$

$$3x+3y = 2x+2y+2z$$

$$x+y = 2z$$

$$z = \frac{x+y}{2}$$

$$18.B \quad \left(\frac{45 \text{ miles}}{1 \text{ hour}} \cdot \frac{5280 \text{ feet}}{1 \text{ mile}} \div \frac{60 \text{ minutes}}{1 \text{ hour}} \right) \div \frac{60 \text{ seconds}}{1 \text{ minute}}$$

$$\left(\frac{45 \text{ miles}}{1 \text{ hour}} \cdot \frac{5280 \text{ feet}}{1 \text{ mile}} \cdot \frac{1 \text{ hour}}{60 \text{ minutes}} \right) \cdot \frac{1 \text{ minute}}{60 \text{ seconds}}$$

$$\frac{45 \cdot 5280 \text{ feet}}{60 \cdot 60 \text{ seconds}} = \frac{23760 \text{ feet}}{3600 \text{ seconds}} = \frac{66 \text{ feet}}{1 \text{ second}}$$

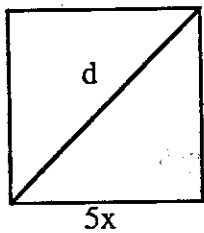
$$19.C \quad 3(x-1) = 7-2x$$

$$3x-3 = 7-2x$$

$$5x = 10$$

$$x = 2$$

20.B



$$\text{Area} = 25x^2$$

$$\text{Side} = 5x$$

By Pythagorean Th.

$$(5x)^2 + (5x)^2 = d^2$$

$$50x^2 = d^2$$

$$d = x\sqrt{50} = 5x\sqrt{2}$$

$$21.A \quad \sqrt{2x+3} = x+2$$

$$2x+3 = (x+2)^2$$

$$2x+3 = x^2+4x+4$$

$$0 = x^2+2x+1 = (x+1)^2$$

$$x = -1$$

22.E None of the answers are correct. Choice A would be correct if the word "or" were replaced with "and".

$$23.A \quad (x-y)^3$$

$$(x-(x+3))^3$$

$$(-3)^3$$

$$-27$$

$$24.D \quad 16f^2 - g^2 = (4f-g)(4f+g)$$

$$= 10 \cdot 12 = 120$$

$$25.B \quad 14a^2 - 15a + 4 = (7a-4)(2a-1)$$

$$26.A \quad a = \frac{2}{3}b, \quad b = \frac{5}{7}c, \quad c = \frac{7}{5}b$$

$$\frac{a}{c} = \frac{\frac{2}{3}b}{\frac{7}{5}b} = \frac{2}{3} \div \frac{7}{5} = \frac{2}{3} \cdot \frac{5}{7} = \frac{10}{21}$$

$$27.B \quad (x_1, y_1) = (2, 7), \quad m = \frac{2}{3}$$

$$y-7 = \frac{2}{3}(x-2) \Rightarrow y-7 = \frac{2}{3}x - \frac{4}{3}$$

$$y = \frac{2}{3}x - \frac{4}{3} + 7 \Rightarrow y = \frac{2}{3}x - \frac{17}{3}$$

y-intercept is $-\frac{17}{3}$

$$28.B \quad 2x^2 - 5x - 7 = 0$$

$$b^2 - 4ac = (-5)^2 - 4 \cdot 2 \cdot -7 > 0$$

If $b^2 - 4ac > 0$, two real roots

29.E None of these equations are linear.

30.C I and III both increase. II does not increase because as the denominator increases the value of the fraction decreases.