

SOLUTIONS ALGEBRA

JANUARY 8, 1994

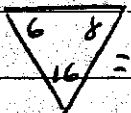
1.  $\frac{x+y}{4} + \frac{x-y}{4} = \frac{2x}{4} = \frac{x}{2} = -6$  [A]

2. 8 and 16 [B] ✓

3.  $\frac{3(4ab)(5)}{2(3a)(4b)} = \frac{5}{2}$  [A]

4.  $(x^2)^{-2} = \frac{1}{x^4} = \frac{1}{81}$  [C]

5.  $1 + \frac{1}{1 + \frac{1}{1 + \frac{1}{3}}} = 1 + \frac{1}{1 + \frac{3}{4}}$   
 $= 1 + \frac{4}{7}$  [B]

6.  $A = 16$    $= \frac{6(8)}{16} = 3$  [A]

7.  $n - \{2n - [3n - (4n - 5n) - 6n] - 7n\} - 8n$   
 $n - \{2n - [-2n] - 7n\} - 8n$   
 $n - \{-3n\} - 8n = -4n$  [A]

8.  $\frac{20}{30} = \sqrt{\frac{20}{n}}$   
 $\frac{2}{3} = \sqrt{\frac{20}{n}}$   
 $\frac{4}{9} = \frac{20}{n}$   $n = 45$   $3n = 135$  [E]

9.  $\frac{63}{99} - \frac{27}{99} = \frac{36}{99} = \frac{4}{11}$  [C]

10.  $\frac{3|-5| + |-3| - 4}{2(-5) - |-3|} = \frac{15 + 3 + 4}{-10 - 3} = -\frac{22}{13}$  [A]

11.  $8x + 2x - 14 + 5x + 53 = 15x + 39$  [A]

12.  $4a + 5a - 2(2a) + 35 = 0$   
 $5a = -35$   
 $a = -7$  [D]

13.  $\frac{.88}{16} = \frac{11}{200} = 5.5\%$  [B]

14.  $m = \frac{1}{2}F + 10$   
 $30 = \frac{1}{2}F + 10$   
 $40 = F$   $m = 30$   $70$  [C]

15.  $3(r-6) + 2 = 4(r+2) - 21$   
 $3r - 18 + 2 = 4r + 8 - 21$   
 $3r - 16 = 4r - 13$   
 $-3 = r$  [A]

16.  $\frac{15+n}{20+2n} = \frac{3}{5}$  [B]  
 $75 + 5n = 60 + 6n$   
 $15 = n$   $20 + 30 = 50$

17.  $ax + b = cb$   
 $ax = cb - b$   
 $ax = b(c-1)$   
 $\frac{ax}{c-1} = b$  [D]

18.  $3(10-2y) \leq 9$   
 $10-2y \leq 3$   
 $-2y \leq -7$   
 $y \geq 3.5$  [B]

19.  $10\left(\frac{5}{16}n + \frac{3}{8}n\right) = 2 + \frac{1}{4}n$   
 $5n + 6n = 32 + 4n$   
 $7n = 32$   
 $n = 32/7$  [B]

20.  $\left(\frac{-5 \pm \sqrt{25 - 36}}{2}\right) = \frac{-125 \pm \sqrt{125^2 - 9}}{8}$  [A]

21.  $\frac{5-4}{6-6} = \frac{1}{0}$  no slope [D]

22.  $(5x^4 + 6x^3 - 9x^2) - (-6x^4 - 6x^3 + 8x)$   
 $5x^4 + 6x^3 - 9x^2 + 6x^4 + 6x^3 - 8x$   
 $11x^4 + 12x^3 - 9x^2 - 8x$  [A]

23.  $A \cup B = \{1, 3, 5, 6, 7, 9, 11, 12\}$  [D]  
 $(A \cup B) \cap C = \{6\}$   
 $[(A \cup B) \cap C]^c = \{0, 1, 2, 3, 4, 5, 7, 8, 9, 10, 11\}$

24.  $\sqrt{108} - \sqrt{50} + \sqrt{48} + \sqrt{2}$   
 $6\sqrt{3} - 5\sqrt{2} + 4\sqrt{3} + \sqrt{2}$   
 $10\sqrt{3} - 4\sqrt{2}$  [C]

25.  $(x^2 - 4)^2 = (x-2)^2(x+2)^2$  [D]

26.  $3x = -8y \rightarrow 3x + 8y = 0$   
 $2x = 3y - 5 \rightarrow 2x - 3y = -5$   
 $5x + 5y = -5$  [C]

27.  $y + 2 = -\frac{1}{2}(x-4)$   
 $0 = x + 2y$  [A]

28.  $\frac{5x-10}{5} - \frac{2x-4}{2} + \frac{3x+9}{-3}$   
 $x-2 - x+2 - x-3$  [D]

29.  $37^1 = 7, 37^2 = 9, 37^3 = 3, 37^4 = 1$  [C]

30. [B] only

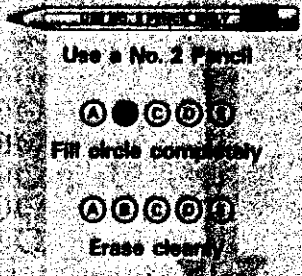
- RESCORE  MARK  TOTAL ONLY
- |    |                                  |                       |                       |                       |                       |                       |                       |                       |
|----|----------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 1  | T                                | F                     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 2  | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 3  | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 4  | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 5  | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 6  | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 7  | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 8  | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 9  | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 10 | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 11 | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 12 | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 13 | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 14 | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 15 | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 16 | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 17 | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 18 | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 19 | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 20 | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 21 | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 22 | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 23 | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 24 | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 25 | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 26 | T                                | F                     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 27 | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 28 | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 29 | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 30 | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 31 | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 32 | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 33 | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 34 | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 35 | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 36 | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 37 | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 38 | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 39 | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 40 | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 41 | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 42 | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 43 | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 44 | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 45 | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 46 | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 47 | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 48 | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 49 | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 50 | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

KEY ITEM COUNT		
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9



STUDENT'S APPROPRIATE									
A	B	C	D	E	A	B	C	D	E
A	B	C	D	E	A	B	C	D	E
A	B	C	D	E	A	B	C	D	E
A	B	C	D	E	A	B	C	D	E
A	B	C	D	E	A	B	C	D	E
A	B	C	D	E	A	B	C	D	E
A	B	C	D	E	A	B	C	D	E
A	B	C	D	E	A	B	C	D	E
A	B	C	D	E	A	B	C	D	E
A	B	C	D	E	A	B	C	D	E
A	B	C	D	E	A	B	C	D	E
A	B	C	D	E	A	B	C	D	E
A	B	C	D	E	A	B	C	D	E
A	B	C	D	E	A	B	C	D	E
A	B	C	D	E	A	B	C	D	E
A	B	C	D	E	A	B	C	D	E
A	B	C	D	E	A	B	C	D	E
A	B	C	D	E	A	B	C	D	E
A	B	C	D	E	A	B	C	D	E
A	B	C	D	E	A	B	C	D	E
A	B	C	D	E	A	B	C	D	E

**MARKING INSTRUCTIONS**



Use a No. 2 Pencil  
 Fill circle completely  
 Erase clearly

SCORE		# CORRECT
RESCORE		% CORRECT
ROSTER NUMBER		SCORE
		RESCORE

NAME ALGEBRA I

SUBJECT \_\_\_\_\_

PERIOD \_\_\_\_\_ DATE 1-8-94