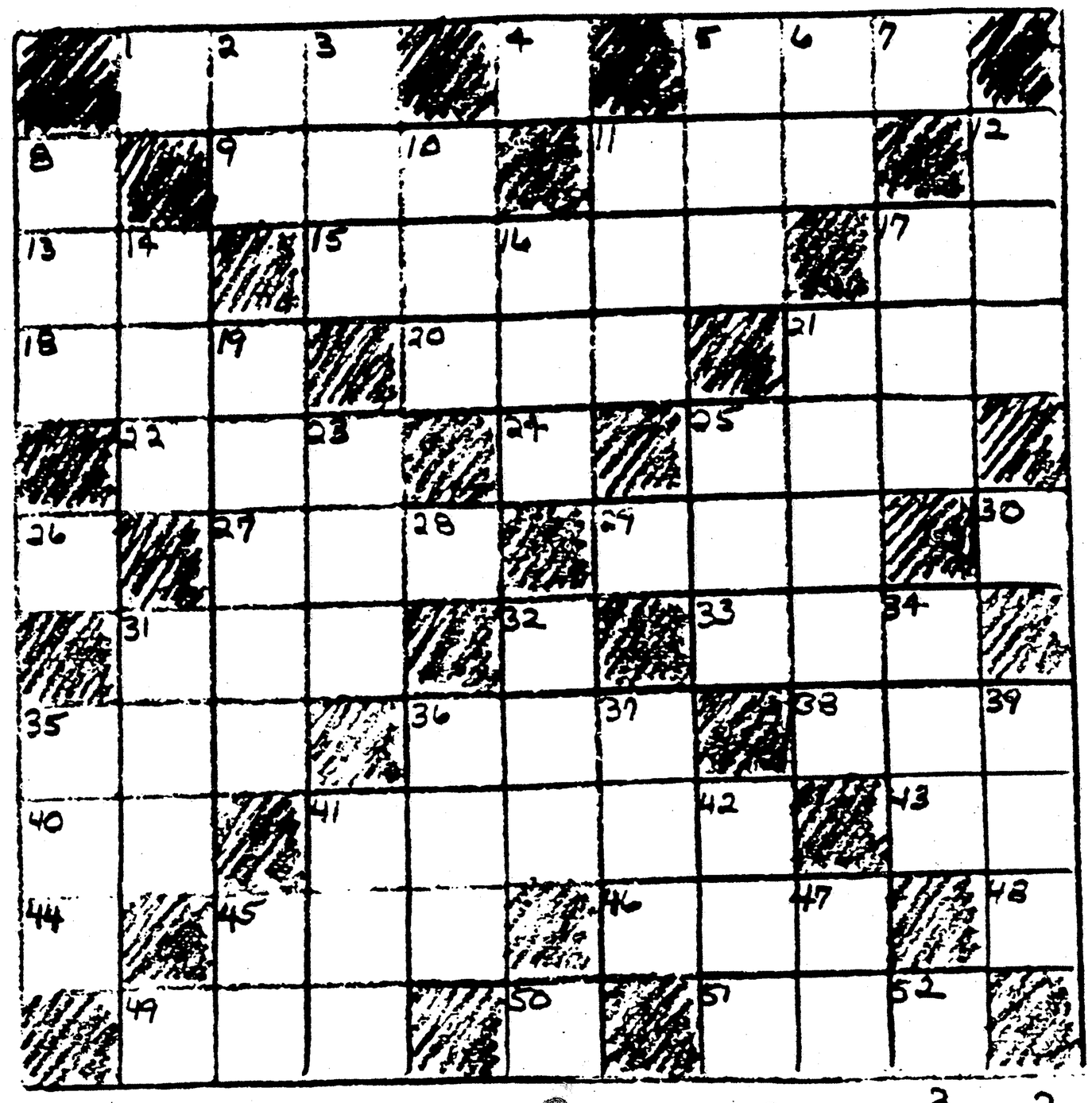
HW 7

EXPONENTS



Across

1. 5^3
4. 2^3
5. 4^4
8. $9^2 - 80$
9. $3^2 + 6^3$
11. $8^3 + 7^2$
12. 1^9
13. $12^2 - 65$
15. $10^4 + 127$
17. $4^5 \div 32$
19. $14^2 + 93$
20. $2^3 \times 3^4$
21. $17^2 - 42$
22. $5^4 \times 1^3$
24. $221 - 6^3$
25. $9^3 + 16$
26. $345 - 7^3$
27. $40^2 \div 4$
29. $11^2 + 8^3$
30. $15^2 - 219$
31. $20^2 + 10^2$
32. $2^5 \div 2^3$
33. $13^3 - 2049$
35. 16^2
36. $30^2 + 9^2$
38. $50^2 - 45^2$
40. $2^6 \times 1^4$
41. $51^2 \times 11$
43. $100^2 \div 10^3$
44. $2^6 \div 4^2$
45. 18^2
46. $6^3 - 5^2$
48. $60^2 \div 1200$
49. $11^3 - 10^3$
50. $1^2 + 1^3$
51. 27^2

Down

1. 1^{15}
2. $2^5 - 10$
3. $23^2 - 2^3$
4. $2^5 \div 2^2$
5. $10^2 + 167$
6. $7^2 + 2$
7. $2^4 - 10$
8. 43×2^2
10. $24^2 - 70$
11. $4^2 \times 33$
12. $11^2 + 6$
14. $31^2 + 5^2$
16. $12^2 + 1^2$
17. $20^2 - 55$
19. $304^2 - 10$
21. 3043×2^3
23. $10^3 \div 2$
25. $9^3 + 2$
26. $4^3 \div 2^5$
28. $2^6 - 8^2$
29. $12^2 \div 24$
30. $1^2 + 1^3 + 2^2$
31. $23^2 + 5^2$
32. $8^3 - 26$
34. $29^2 + 30$
35. $2^3 \times 33$
36. $4^5 - 40$
37. $2^7 - 17$
39. $10^3 \div 2 + 3$
41. $15^2 - 2^2$
42. $14^2 + 1^7$
45. $1 + 2^5$
47. $2^3 + 2^2$
49. $9^2 \div 3^3$
50. $2^5 \div 4^2$
52. 3^2

Hot Air Balloon

Name _____
PERIOD: DATE:

For our hot air balloon, each blast of hot air raises the balloon 1 foot. Each sandbag added lowers the balloon 1 foot. After each of the statements below, write down how many feet above or below sea level (0 ft) the balloon will be.

1. You and your balloon are over the Grand Canyon at sea level (0 ft.). You add 17 blasts of hot air. _____

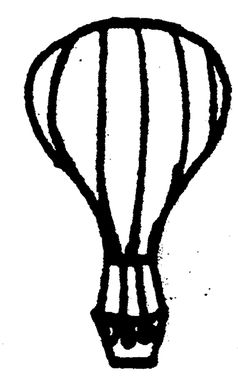
2. Now, with the help of a passing airplane, you add 21 sandbags. _____

3. You decide you don't like this view, so you add 35 blasts of hot air. _____

4. That silly plane flies by again, throwing in 49 sandbags. _____

5. Your basket has become a bit overcrowded, so you throw out 29 sandbags. _____

6. You also notice that your balloon is getting too full, so using your exit vent you take away 22 blasts of hot air. _____



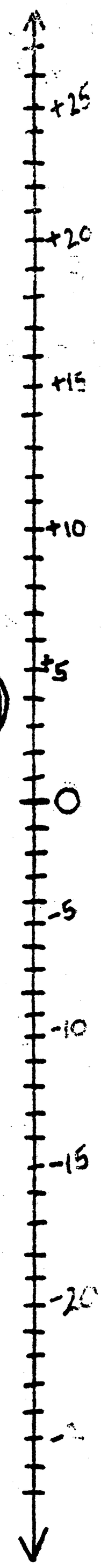
7. Let's get rid of a few more sandbags. Toss out 34 sandbags. _____

8. Oops! A little too high. Take away 18 blasts of hot air. _____

9. From your last position you now cause the balloon to rise 13 feet. What did you do? _____

10. Now your balloon drops 23 feet. What did you do? _____

11. You now take the balloon back to sea level. What did you do? _____



For problems 12-20, write a mathematical statement to show what's happening and where the balloon ends up. A blast of hot air is the same as positive one (+1) and a sandbag is the same as negative one (−1). For example, if you did this for #1 on the other side, your mathematical statement would be $0 + 17 = 17$. For #2 it would be $17 + {}^{-}21 = -4$.

12. Again you are starting at sea level. You add 19 sandbags. _____

13. Now you add 11 blasts of hot air. _____

14. Now throw out 41 sandbags. _____

15. Put 14 sandbags back in. _____

16. Take away 7 blasts of hot air. _____

17. Take away 27 sandbags. _____

18. Take away 23 blasts of hot air. _____

19. From here your balloon rises 5 feet. Write down two different mathematical statements that show this.

_____ _____

20. Finally, write two different mathematical statements that show how you can return to sea level.

_____ _____