

Name: _____ Class: _____ Date: _____

This worksheet combines everything you've learned about positive and negative integers. Take it step by step.

Section A – Integer Ladder

Follow each step in order and track your running total as you go.

1. Start at 5. Add -8 . Add 3. Subtract -6 . Where do you end up?

2. Start at -12 . Subtract -20 . Add -5 . Subtract 3. Where do you end up?

Section B – Real World, Up and Down

3. A hot air balloon is at $+450$ m. It descends 300 m, then rises 120 m. What is its new altitude?

4. Your bank balance is $-\$45$ (you are overdrawn). You deposit $\$80$, then spend $\$25$. What is your new balance?

5. A submarine at -200 m rises 150 m to avoid a reef, then dives a further 80 m. What is its final depth?

6. The temperature is -4°C . It rises 9°C by afternoon, then a cold front drops it by 15°C by evening. What is the evening temperature?

Section C – Ordering the Mixed Bag

7. Arrange from **least to greatest**: -15 , 8, -3 , 0, -22 , 6, -1

8. Which statement below is **NOT** true?

A) $-8 < 3$ B) $0 > -1$ C) $-20 < -19$ D) $5 < -5$

Section D – Integer Operations

Work out the missing number in each equation.

9. $-7 + \underline{\hspace{2cm}} = 2$

10. $\underline{\hspace{2cm}} - (-4) = 10$

11. Three of these statements are true and one is false. Circle the **FALSE** one:

A) $-6 + 6 = 0$ B) $4 - 9 = -5$ C) $-3 - (-3) = -6$ D) $-10 + 3 = -7$

Section E – Integer Maze

Start at 0. Apply each operation in order, writing your running total in the box below it, to find where you finish.

12. $0 \rightarrow +7 \rightarrow -12 \rightarrow +4 \rightarrow -9 \rightarrow +15 \rightarrow -3 \rightarrow ?$

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Section F – Mystery & Logic

13. I am an integer. I am 8 units away from zero, but I am not positive. What number am I?

14. The sum of two integers is -3 . One of them is 10. What is the other?

15. A number and its opposite are added together. What is the result, **always**?

Section G – Word Problems

16. A football team gained 12 yards on one play and lost 20 yards on the next. What was their total yard change?

17. Over four days, a stock price changed by: $+15$, -8 , -22 , $+6$ (in dollars). What was the total change over the four days? Was the stock up or down overall?

Answer Key

1. $5 + (-8) + 3 - (-6) = 6$
2. $-12 - (-20) + (-5) - 3 = 0$
3. $450 - 300 + 120 = 270$ m
4. $-45 + 80 - 25 = \$10$
5. $-200 + 150 - 80 = -130$ m
6. $-4 + 9 - 15 = -10^{\circ}\text{C}$
7. $-22, -15, -3, -1, 0, 6, 8$
8. D (5 is greater than -5 , not less than)
9. $9 (-7 + 9 = 2)$
10. $6 (6 - (-4) = 10)$
11. C is false ($-3 - (-3) = 0$, not -6)
12. Running totals: 7, -5 , -1 , -10 , 5, 2 – final position 2
13. -8
14. $-13 (10 + (-13) = -3)$
15. 0, every time – a number and its opposite always sum to zero
16. $12 + (-20) = -8$ yards (a loss of 8 yards overall)
17. $15 - 8 - 22 + 6 = -9$ – the stock was down \$9 overall