

Integers and Absolute Value

Name: _____

Write an integer for each situation.

1) A profit of \$12

2) 1,440 feet below sea level

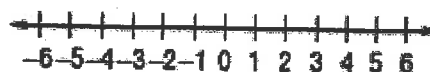
3) 22° F below zero

4) a gain of 31 yards

Graph each set of integers on a number line.

5) $\{-5, 0, 5\}$

6) $\{-3, -2, 1, -4\}$



Evaluate each expression.

7) $|-11|$

8) $|-5| + 8$

9) $|-4| - |-4|$

10) $|12| \div 2 \times |-5|$

11) $|-4| + 7 - |3|$

12) $9 + |-6| \div |-3|$

13) A veterinarian recommends that a St. Bernard lose weight.
Write an integer to describe the dog losing 25 pounds.

14) Mount Kilimanjaro is the highest peak in Africa. Write an integer to represent the elevation of Mount Kilimanjaro at 5,895 meters above sea level.

15) Gasoline prices occasionally fluctuate during a two-month period of time. Prices increased 34 cents per gallon during the month of April and decreased 17 cents per gallon during the month of May. Which situation has the greater absolute value? Explain.

Adding Integers Worksheet

Name: _____

Add the integers.

1. $5 + (-8)$

2. $-3 + 3$

3. $-3 + (-8)$

4. $-7 + (-7)$

5. $-8 + 10$

6. $-7 + 13$

7. $15 + (-10)$

8. $-11 + (-12)$

9. $25 + (-12)$

10. $-14 + (-13)$

11. $14 + (-27)$

12. $-28 + 16$

13. $5 + 11 + (-5)$

14. $7 + (-5) + 5$

15. $9 + (-9) + 10$

16. The Dolphins football team gained 16 yards on their first play then lost 11 yards on the next play. Write an addition expression to represent this situation. Find the sum and explain its meaning.

17. Demetrius deposits \$120 into his account. One week later, he withdraws \$36. Write an addition expression to represent this situation. How much higher or lower is the amount in his account after these two transactions?

Adding Integers Word Problems

Name: _____

Add the integers.

1. $34 + 22$

2. $-29 + 30$

3. $9 + (-32)$

4. $-16 + (-28)$

5. $4 + (-50)$

6. $-12 + (-63)$

7. $-42 + 42$

8. $-28 + 14$

9. $13 + 63$

10. $18 + (-12) + 5$

11. $-22 + (-10) + 15$

12. $-14 + 0 + 13$

Write an addition expression to describe each situation. Then find each sum and explain its meaning.

13. An actor gains 20 pounds for a part and then loses 15 pounds during the filming of the movie to go along with the story.

14. At 4:00 A.M., the outside temperature was -28°F . By 4:00 P.M. that same day, it rose 38 degrees.

15. The latest thrill ride at a popular theme park takes roller coaster fans on an exciting ride. In the first 20 seconds, it carries its passengers up a 100-meter hill, plunges them down 72 meters, and quickly takes them back up a 48-meter rise. How much higher or lower from the start of the ride are they after these 20 seconds?

Write an addition expression to describe each situation. Then find each sum.

16. A team gains 20 yards. Then they lose 7 yards. What is the team's total yards?

17. Roger owes his mom \$5. He borrows another \$6 from her. How much money does Roger owe his mom?

18. Jewel's score was 5 over par on the first 9 holes. Her score was 4 under par on the second 9 holes. What was Jewel's score after the first two holes?

19. A balloon rises 340 feet into the air. Then it descends 130 feet. How high is the balloon?

20. A cyclist travels downhill for 125 feet. Then she travels up a hill 50 feet.

21. A plane descends 1,200 feet. Then it descends another 500 feet.

Subtracting Integers

Name: _____

Subtract the integers

1. $5 - 2$

2. $6 - (-7)$

3. $-3 - 2$

4. $8 - 13$

5. $-7 - (-7)$

6. $6 - 12$

7. $15 - (-7)$

8. $-15 - 6$

9. $-3 - 8$

10. $-10 - 12$

11. $13 - (-12)$

12. $14 - (-22)$

13. $10 - (-20)$

14. $-16 - 14$

15. $-25 - 25$

16. $6 - (-31)$

17. $-18 - (-40)$

18. $15 - (-61)$

Evaluate each expression if $r = -4$, $s = 10$, and $t = -7$.

19. $r - 7$

20. $t - s$

21. $s - (-8)$

22. $t - r$

23. $s - t$

24. $r - s$

Name: _____ Class: _____ Date: _____

Subtracting Integers

1 $(-41) - (-48)$

11 $(-46) - (-29)$

21 $(-41) - 35$

2 $(-47) - 32$

12 $31 - (-28)$

22 $(-50) - 21$

3 $(-35) - (-17)$

13 $46 - 31$

23 $39 - 46$

4 $12 - (-44)$

14 $(-29) - (-48)$

24 $4 - (-21)$

5 $25 - (-35)$

15 $(-49) - 48$

25 $46 - (-34)$

6 $(-36) - 15$

16 $(-39) - 25$

26 $49 - (-27)$

7 $47 - 9$

17 $(-20) - (-29)$

27 $(-29) - (-6)$

8 $17 - 35$

18 $(-45) - (-17)$

28 $46 - (-2)$

9 $(-31) - 32$

19 $26 - 21$

29 $(-45) - (-12)$

10 $(-35) - (-49)$

20 $43 - (-17)$

30 $32 - 24$

Subtracting Integers - Word Problems

Name: _____

Subtract.

1. $16 - 14$

2. $-4 - 2$

3. $9 - (-2)$

4. $-6 - (-8)$

5. $-20 - 10$

6. $-28 - (-13)$

7. $-33 - 33$

8. $28 - 14$

9. $13 - (-63)$

10. $-18 - (-12)$

11. $52 - (-30)$

12. $-15 - 0$

13. The highest and lowest recorded temperatures for the state of Texas are 120°F and -23°F . Find the difference in these extreme temperatures.

ALGEBRA Evaluate each expression if $x = -8$, $y = 7$, and $z = -11$.

14. $x - 7$

15. $-13 - y$

16. $-11 - z$

17. $x - (-z)$

18. $|y - z|$

19. $x - z - y$

20. In golf, scores are often stated as the number of strokes above or below par for the course. Four golfers played two rounds of golf during the weekend. The table lists their scores for each round in relation to par.

Golfer	Patrick	Diane	James	Judy
Round 1	-6	+1	+2	-3
Round 2	-2	-4	+7	+6

a. Find the difference between James's Round 2 score and Diane's Round 2 score.

b. Find the difference between Patrick's lower score and Judy's higher score.

21. A team gained 5 yards on their first play of the game. Then they lost 6 yards. Find the total change in yardage.

22. Your checking account is overdrawn by \$50. You write a check for \$20. What is the balance in your account?

23. The average temperature in Calgary, Canada, is 22°C in July and -11°C in January. Find the range of the highest and lowest temperatures in Calgary.

24. A roller coaster begins at 90 feet above ground level. Then it descends 105 feet. Find the height of the coaster after the first descent.

25. Sonia has \$235 in her savings account. She withdraws \$45. What is left in her savings account?



Why Is Life Like a Shower?



Simplify or evaluate each expression below, as directed. Find your answer in the corresponding set of answer boxes. Print the letter of the exercise in that box.

SIMPLIFY:

- (W) $-(-4) + 10$
- (A) $3 + [-(-8)]$
- (N) $-12 + [-(-5)]$
- (D) $-(7 + 9)$
- (O) $-(-2 + 8)$

SIMPLIFY:

- (N) $-(-11) + 6$
- (E) $-[4 + (-7)]$
- (U) $-[12 + (-3)]$
- (G) $-[-5 + (-5)]$
- (N) $-[-(-2)]$

SIMPLIFY:

- (T) $6 + |-1|$
- (O) $|-3| + |30|$
- (R) $|4 + (-9)| + 10$
- (N) $|-5 + 12| + (-7)$
- (R) $8 + |1 + (-15)|$

33	-7	3	-13	14	15	-6	0	10	20	7	-9	22	17	1	11	-2	-16
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SIMPLIFY:

- (I) $-|-11 + 6|$
- (O) $-|10 + (-4)|$
- (E) $3|-2| + |-3|$
- (R) $5|-9 + 13| + (-1)$
- (E) $-|2|-7 + (-6)$

EVALUATE:

- (O) $-x$ if $x = -3$
- (A) $-y$ if $y = 1$
- (Y) $-x + 5$ if $x = -7$
- (R) $-(-a)$ if $a = -20$
- (U) $-x + (-9)$ if $x = 2$

EVALUATE:

- (N) $|-x|$ if $x = 7$
- (T) $|n + 1|$ if $n = -18$
- (H) $-|-w|$ if $w = -10$
- (W) $-x + (-8)$ if $x = 4$
- (T) $-|3|-y + |w|$ if $y = -6$

12	3	-11	19	-8	15	-5	7	-2	-10	-6	-24	-22	-4	-1	17	9	-20
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Multiply and Dividing Integers
Skills Practice

Name: _____

Solve each problem by multiplying and dividing.

1. $-4(6)$

2. $-2(-8)$

3. $12(-4)$

4. $-6(5)$

5. $-10(-9)$

6. $-(5)^2$

7. $(-5)^2$

8. $-30(5)$

9. $20(-6)$

10. $-14(-6)$

11. $(-13)^2$

12. $-7(15)$

13. $-3(4)$

14. $7(-3)$

15. $3(-3)$

16. $-2(-10)$

17. $(-5)(-3)(4)$

18. $-3(-3)(4)$

19. $-3(-5)$

20. $5(-3)$

21. $7(-5)(4)$

22. $-2(-5)(-3)$

23. $-10(-3)$

24. $-2(-3)^2$

25. $-15 \div 3$

26. $-24 \div (-8)$

27. $22 \div (-2)$

28. $-49 \div (-7)$

29. $-8 \div (-8)$

30. $36 \div (-4)$

31. $225 \div (-15)$

32. $0 \div (-9)$

33. $-38 \div 2$

34. $64/44$

35. $-500 \div (-50)$

36. $-189 \div (-21)$

ALGEBRA Evaluate each expression if $m = -32$, $n = 2$, and $p = -8$.

37. $m \div n$

38. $p \div 4$

39. $p^2 \div m$

40. $m \div p$

41. $-p/n$

42. $p \div (-n^2)$

43. $p \div 4n$

44. $(18 - n) \div -4$

45. $(m + 8) \div -4$

Independent Practice - Multiply and Divide Integers Day 2

Name: _____

1) At lunch time, Benjamin often borrows money from his friends to buy snacks in the school cafeteria. Benjamin borrowed \$2.00 from his friend Clyde five days last week to buy ice cream bars. Represent the amount Benjamin borrowed as the product of two integers; then, determine how much Benjamin owed his friend last week.

For Problems 2–4, find at least two possible sets of values that will work for each problem.

2) Fill in the blanks with two integers (other than 1 and -1). $\underline{\quad} \times (-2) \times \underline{\quad} = -20$
What must be true about the relationship between the two numbers you chose?

3) Fill in the blanks with an integer (other than 1 and -1). $100 \div 50 \times \underline{\quad} = -70$
What must be true about the integer you chose?

4) Fill in the blanks with two rational numbers. $\underline{\quad} \times \underline{\quad} = -40$
What must be true about the relationship between the two numbers you chose?

For Problems 5–6, create word problems that can be represented by each expression, and then represent each product or quotient as a single rational number.

5) $8 \times (-2)$

6) $-6 \div (2)$

Lesson Summary

The rules that apply for multiplying and dividing integers apply to rational numbers. We can use the products and quotients of rational numbers to describe real-world situations.

Independent Practice ~ Multiply and Divide Integers Day 2

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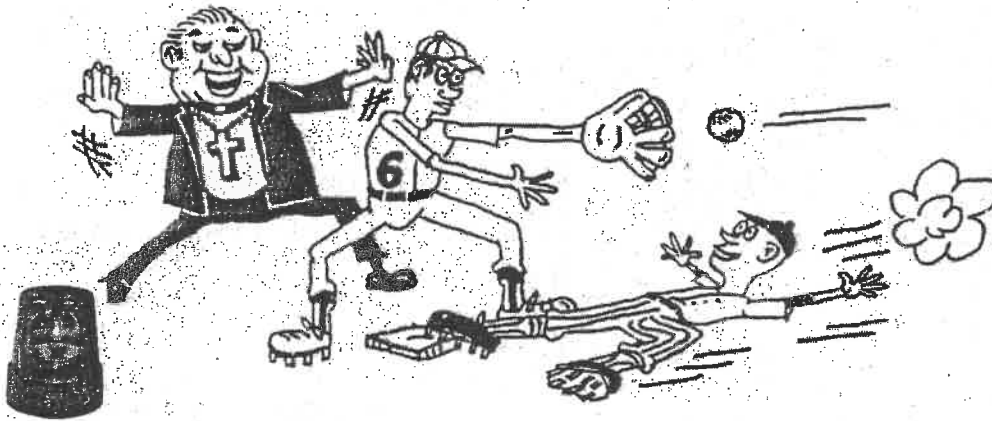
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5. $8 \times (-2)$

6. $-6 \div (2)$

Who referees sporting events in Vatican City?

DIRECTIONS: Solve each problem and then find your answer in the decoder. Each time your answer occurs, write the letter of the problem above it.



1. $-2 + (-7) =$ _____ (o)
2. $-13(10) =$ _____ (t)
3. $15 - 20 =$ _____ (a)
4. $-15 + 30 + 20 + (-11) =$ _____ (n)
5. $-5(-8)(3) =$ _____ (e)
6. $-2 + (-8) + 6 =$ _____ (m)
7. $-17(-8) =$ _____ (l)
8. $-12 \div (-6) =$ _____ (i)
9. $61 + (-33) + (-20) =$ _____ (r)
10. $-10 \div (-2) =$ _____ (h)
11. $-36 \div 6 =$ _____ (p)
12. $18(-9) =$ _____ (y)
13. $-48 \div (-6) + 12 =$ _____ (u)



-130 -8 120 -8 -9 136 -162

8 -9 -4 -5 24 20 -4 -6 2 8 120

