TEST BANK

Third Edition

Prealgebra

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PREALGEBRA   Name:

1. Graph –2 and 7 on a number line.

1.
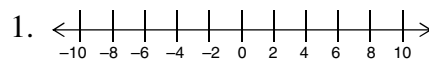
For Exercises 2–10, simplify.

2. $|14|$

2. _____

3. $-(-(-15))$

3. _____

4. $38 + (-12)$

4. _____

5. $24 - 32$

5. _____

6. $-16 - 8$

6. _____

7. $-11 - (-23)$

7. _____

8. $(-3)(-17)$

8. _____

9. $(-1)(-8)(-7)$

9. _____

10. $\dfrac{-45}{-9}$

10. _____

11. Solve and check. $-15 + m = 37$

11. _____

12. Solve and check. $-7n = 63$

12. _____

13. Evaluate. $(-12)^2$

13. _____

14. Evaluate. -5^2

14. _____

15. Find all square roots of 400.

15. _____

For Exercises 16–20, simplify.

16. $24 - 2^2 + 3(5 - 9)$

16. _____

17. $|-36 \div (5 - 7)| + \sqrt{16 + 9}$

17. _____

18. $\left[24 \div 6 + (9 - 5)\right] - \sqrt{49} + (-3)^3$

18. _____

19. $\dfrac{6^2 - 5(-4)}{24 \div 3 - 1}$

19. _____

20. $\dfrac{(11-6)^2 + 7}{(-7)(4) - \sqrt{16}}$

20. _____

21. Below is Joe's credit card statement. What is his new balance?

Transaction	Amount	Balance
Beginning balance		–$379
Clothing boutique	–$55	
Payment	$200	
Finance charges	–$6	

21. _____

22. Katie has four credit card accounts. Three accounts have a balance of –$375 each and the fourth has a balance of –$520. What is her total balance?

22. _____

23. Maggie drives at an average rate of 68 miles per hour. How far will she travel in four hours?

23. _____

24. Charlie takes out a loan to buy a house. He spends $8800 on repairs and improvements, then sells the house for $125,900. If the payoff for the loan is $95,928, what is his net? Is it a profit or a loss?

24. _____

25. The current in a circuit measures 9 amps. If the resistance is 12 ohms, find the voltage.

25. _____

1. Graph –5 and 6 on a number line.

1. ![number line from –10 to 10]
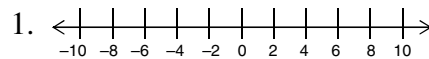
For Exercises 2–7, simplify.

2. $-|29|$

2. _____

3. $-(-17)$

3. _____

4. $29 + (-17)$

4. _____

5. $13 - 48$

5. _____

6. $-18 - 22$

6. _____

7. $-14 - (-26)$

7. _____

8. $(-5)(-14)$

8. _____

9. $(-2)(-4)(-6)$

9. _____

10. $\dfrac{-63}{9}$

10. _____

11. Solve and check. $-11 + k = 33$

11. _____

12. Solve and check. $-7n = 42$

12. _____

13. Evaluate. $(-6)^3$

13. _____

14. Evaluate. -2^4

14. _____

15. Find all square roots of 169.

15. _____

For Exercises 16–20, simplify.

16. $32 - 5^2 + 3(2 - 6)$

16. _____

17. $|-32 \div (4 - 8)| + \sqrt{100 - 36}$

17. _____

18. $\left[56 \div 8 + (5 - 4)\right] - \sqrt{144} + (-2)^3$

18. _____

19. $\dfrac{4^3 - 4(-9)}{-24 \div 4 + 2}$

19. _____

20. $\dfrac{(11-6)^2 + 35}{(-4)(5) + \sqrt{25}}$

20. _____

21. Below is Kathy's credit card statement. What is her new balance?

21. _____

Transaction	Amount	Balance
Beginning balance		–$257
Clothing boutique	–$67	
Payment	$150	
Finance charges	–$7	

22. Bob has three credit card accounts. Two accounts have a balance of –$275 and the third has a balance of –$497. What is his total balance?

22. _____

23. Jane drives at an average rate of 65 miles per hour. How far will she travel in three hours?

23. _____

24. Amy takes out a loan to buy a house. She spends $16,500 on repairs and improvements, then sells the house for $119,900. If the payoff for the loan is $91,785, what is her net? Is it a profit or a loss?

24. _____

25. The current in a circuit measures –10 amps. If the resistance is 12 ohms, find the voltage.

25. _____

1. Graph 4 and –5 on a number line.

1.
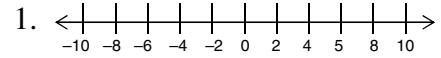
For Exercises 2–7, simplify.

2. $-|-25|$

2. _____

3. $-(-(-12))$

3. _____

4. $19 + (-30)$

4. _____

5. $45 - 63$

5. _____

6. $-17 - 38$

6. _____

7. $-13 - (-29)$

7. _____

8. $(-3)(-17)$

8. _____

9. $(-2)(-7)(-3)$

9. _____

10. $\dfrac{-96}{6}$

10. _____

11. Solve and check. $-9 + r = 25$

11. _____

12. Solve and check. $-8n = -72$

12. _____

13. Evaluate. $(-3)^5$

13. _____

14. Evaluate. -8^2

14. _____

15. Find all square roots of 576.

15. _____

For Exercises 16–20, simplify.

16. $16 - 2(5 + 4) + 2^3$

16. _____

17. $|72 \div (3 - 9)| + 3(4 - 8)$

17. _____

18. $[24 \div 2 \cdot 3] - \sqrt{36}$

18. _____
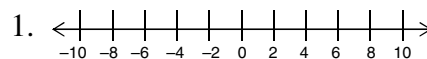
19. $\dfrac{3^4 + 3(-7)}{36 \div 12 - 4}$

19. _____

20. $\dfrac{(5-7)^2 + 21}{(-3)(5) + \sqrt{169}}$

20. _____

21. Below is Bill's credit card statement. What is his new balance?

21. _____

Transaction	Amount	Balance
Beginning balance		−$192
Clothing boutique	−$63	
Payment	$150	
Finance charges	−$6	

22. Wendy owes money on her credit card and an auto loan. Her net worth is –$285. She wishes to pay off her debts and have a net worth of $500 by her birthday. By how much must she increase her net worth in order to achieve her goal?

22. _____

23. An airplane flew 1280 miles in four hours. Find its average speed.

23. _____

24. Dave took out a loan to buy a house. He spent $16,850 on repairs and improvements, and then sold the house for $132,500. If the payoff for the loan is $101,900, what is his net? Is it a profit or a loss?

24. _____

25. A 500 lb concrete slab is suspended by four ropes tied to the corners. Each rope has an upward force of 110 lb. What is the resultant force?

25. _____

1. Graph –6, –3, 0 and 4 on a number line.

1.
$$\xleftarrow{\hspace{1cm}}\hspace{-0.2cm}\begin{array}{ccccccccccc} | & | & | & | & | & | & | & | & | & | & | \\ -10 & -8 & -6 & -4 & -2 & 0 & 2 & 4 & 6 & 8 & 10 \end{array}\xrightarrow{\hspace{1cm}}$$

For Exercises 2 –7, simplify.

2. $-|-204|$

2. _____

3. $-(-(-63))$

3. _____

4. $27 + (-15) - 12$

4. _____

5. $44 - 59$

5. _____

6. $-68 - 111$

6. _____

7. $-123 - (-356)$

7. _____

8. $24(-18)$

8. _____

9. $(-4)(-5)(-2)(-10)$

9. _____

10. $\dfrac{-225}{25}$

10. _____

11. Solve and check. $-54 + n = 92$

11. _____

12. Solve and check. $-17n = -527$

12. _____

13. Evaluate. $(-2)^6$

13. _____

14. Evaluate. -19^2

14. _____

15. Find all square roots of 625.

15. _____

For Exercises 16 –20, simplify.

16. $-2|15 - 20 \cdot 4| + (-64) \div 16$

16. _____

17. $36 \cdot 2 - 3^2 + 3|(-2)(-4)(-1)|$

17. _____

18. $-3\{-42 \div (-6) + [2^5 + (-3)^3]\}$

18. _____

19. $\dfrac{-\left|20-2^4\right|^3}{3(-12)+(-1)(-4)}$

19. _____

20. $\dfrac{(11-6)^3+2(-2)(-11)}{(-7)(-1)^4-\sqrt{100-64}}$

20. _____

21. Below is Callie's credit card statement. What is her new balance?

21. _____

Transaction	Amount	Balance
Beginning balance		−$1085
Clothing boutique	−$105	
Payment	$400	
Finance charges	−$29	

22. As a result of startup expenses George's new business has a net worth of –$57,938 at the end of its first month of operation. The next month, George's uncle invested $25,000 in the business. George's goal is for the business to have a net worth of $150,000 at the end of the first year. How much profit must the business make in order for him to reach his goal?

22. _____

23. The elevator in the Empire State Building travels from the lobby to the 80th floor, a distance of about 968 feet in about 44 seconds. What is the average rate of the elevator?

23. _____

24. Meredith made a down payment of $2250 when she bought a new car. She made 48 monthly payments of $450 each and spent $1250 on maintenance and repairs. Two years after paying off her car loan, Meredith sold the car for $8500. What is her net? Is it a profit or a loss?

24. _____

25. Izzie drove to her grandmother's house for Thanksgiving dinner. She left home at 9:00 A.M. and drove 240 miles. After a one hour stop for lunch, she drove another 180 miles and arrived at her grandmother's house at 4:00 P.M. Find Izzie's average driving speed.

25. _____

1. Arrange the following numbers in the order you would place them on a number line, going from left to right.   1. _____

    6, –3, 5, –8, –10

    (a) 6, 5, –3, –8, –10   (c) –3, 5, 6, –8, –10

    (b) –3, –8, –10, 5, 6   (d) –10, –8, –3, 5, 6

For Exercises 2–10, simplify.

2. $|-(-37)|$ 2. _____

    (a) –37   (b) 0   (c) 37   (d) Undefined

3. $-[-(-55)]$ 3. _____

    (a) –55   (b) 0   (c) 55   (d) Undefined

4. –3 + 13   4. _____

    (a) –16   (b) –10   (c) 10   (d) 16

5. 7 – 16   5. _____

    (a) –23   (b) –9   (c) 9   (d) 23

6. –19 – 21   6. _____

    (a) –40   (b) –2   (c) 2   (d) 40

7. 24 – (–13)   7. _____

    (a) –37   (b) –11   (c) 11   (d) 37

8. – 3(–17)   8. _____

    (a) –51   (b) –20   (c) 20   (d) 51

9. (–7)(–5)(6)   9. _____

    (a) –210   (b) –7   (c) 10   (d) 210

10. 48 ÷ (–16)   10. _____

    (a) –4   (b) –3   (c) 3   (d) 32

11. Solve and check. $8 + t = -3$ 11. _____

   (a) -11 (b) -5 (c) 5 (d) 11

12. Solve and check. $-14r = -42$ 12. _____

   (a) -56 (b) -28 (c) -3 (d) 3

13. Evaluate. $(-3)^3$ 13. _____

   (a) -27 (b) -9 (c) 9 (d) 27

14. Evaluate. -5^2 14. _____

   (a) -25 (b) -10 (c) 10 (d) 25

15. Find all square roots of 361.   15. _____

   (a) -21 (b) 19 (c) ± 19 (d) ± 21

For Exercises 16–20, simplify.

16. $10 - \left| 6(2)^2 - (3+6) \right|$ 16. _____

   (a) -3 (b) -2 (c) 2 (d) 3

17. $3 - 2\left[4 + (5-6) \right]$ 17. _____

   (a) -4 (b) -3 (c) 3 (d) 4

18. $\sqrt{225 - 81} + \left[55 \div (1-12) \right]$ 18. _____

   (a) -17 (b) -7 (c) 7 (d) 17

19. $\dfrac{5(-2) + 4(-1)}{-2 - 5}$ 19. _____

   (a) -4 (b) -2 (c) 2 (d) 4

20. $\dfrac{(20-13)^2 + 7}{(-5)(-3) + \sqrt{169}}$ 20. _____

   (a) -28 (b) -2 (c) 2 (d) 28

21. Below is Sally's credit card statement. What is her new balance?   21. _____

Transactions	Amount	Balance
Beginning balance		–$466
Sporting goods store	–$74	
Payment	$375	
Music store	–$52	
Finance charges	–$9	

   (a) –$975   (b) –$226   (c) –$209   (d) –$125

22. Tim bought 200 DVD's at $10 each. He couldn't sell the DVD's and   22. _____
    sold them to a store for $8 each. How much money did he lose?

   (a) –$1600   (b) –$400   (c) $400   (d) $1600

23. Derek took out a loan to buy a condominium. He spent $3590 on repairs   23. _____
    and improvements and then sold the condo for $85,600. If the payoff for
    the loan was $77,540, what was his net? Is it a profit or loss?

   (a) –$11,650; loss   (c) $4470; gain

   (b) –$4470; loss   (d) $11,650; gain

24. Three roommates split a $255 electricity bill evenly. How much should   24. _____
     each roommate pay?

   (a) $85   (b) $113   (c) $127.50   (d) $255

25. Ken and Kate left home at 10 A.M. to visit their daughter Margo at   25. _____
    college. They drove 122 miles, then stopped for an hour for lunch. After
    lunch, they drove another 188 miles, and arrived at Margo's dormitory at
    4 P.M. What was their average driving speed?

   (a) 51 mph   (b) 62 mph   (c) 68 mph   (d) 72 mph