

LESSON**1****Algebraic Reasoning****Practice B: Order of Operations****Simplify each expression.**

1. $15 \cdot 3 + 12 \cdot 2$

2. $212 + 21 \div 3$

3. $9 \cdot 3 - 18 \div 3$

4. $65 - 36 \div 3$

5. $100 - 9^2 + 2$

6. $3 \cdot 5 - 45 \div 3^2$

7. $54 \div 6 + 4 \cdot 6$

8. $(6 + 5) \cdot 16 \div 2$

9. $60 - 8 \cdot 12 \div 3$

10. $45 - 3^2 \cdot 5$

11. $52 - (8 \cdot 2 \div 4) + 3^2$

12. $(2^3 + 10 \div 2) \cdot 3$

13. $25 + 7(18 - 4^2)$

14. $(6 \cdot 3 - 12)^2 \div 9 + 7$

15. $4^3 - (3 + 12 \cdot 2 - 9)$

16. $2^4 \div 8 + 5$

17. $(1 + 2)^2 \cdot (3 - 1)^2 \div 2$

18. $(16 \div 4) + 4 \cdot (2^2 - 2)$

19. $2^5 - (3 \cdot 7 - 7)$

20. $75 + 5^2 - (8 - 3)$

21. $9 \cdot 6 - 5(10 - 3)$

22. $96 \div 4 + 5 \cdot 2^2$

23. $(15 - 6)^2 \div 3 - 3^3$

24. $19 - 8 \cdot 5 \div 10 + 6 \div 3$

25. Jared has \$32. He buys 5 packs of trading cards that cost \$3 each and a display book that costs \$7. Simplify the expression $32 - (5 \cdot 3 + 7)$ to find out how much money Jared has left.

26. David buys 3 movie tickets for \$6 each and 2 bags of popcorn for \$2 each. Simplify the expression $3 \cdot 6 + 2 \cdot 2$ to find out how much money David spent in all.

Algebraic Reasoning

Answers for Lesson 1

Practice A

- | | |
|----------|---------|
| 1. B | 2. J |
| 3. A | 4. G |
| 5. C | 6. H |
| 7. 7 | 8. 38 |
| 9. 12 | 10. 1 |
| 11. 48 | 12. 27 |
| 13. 80 | 14. 1 |
| 15. 14 | 16. \$8 |
| 17. \$52 | |

Practice B

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|----------|----------|
| 1. 69 | 2. 219 |
| 3. 21 | 4. 53 |
| 5. 21 | 6. 10 |
| 7. 33 | 8. 88 |
| 9. 28 | 10. 0 |
| 11. 57 | 12. 39 |
| 13. 39 | 14. 11 |
| 15. 46 | 16. 7 |
| 17. 18 | 18. 12 |
| 19. 18 | 20. 95 |
| 21. 19 | 22. 44 |
| 23. 0 | 24. 17 |
| 25. \$10 | 26. \$22 |

Practice C

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|------------------------------------|-----------------------------|
| 1. 195 | 2. 154 |
| 3. 51 | 4. 71 |
| 5. 524 | 6. 19 |
| 7. 81 | 8. 130 |
| 9. 85 | 10. 1 |
| 11. 38 | 12. 8 |
| 13. 7 | 14. 18 |
| 15. 12 | 16. $18 + 2(1 + 3^2)$ |
| 17. $(4 \cdot 2 - 2)^2 \div 9 + 2$ | |
| 18. $3^3 - (9 \cdot 2 + 1)$ | 19. $2^3 - (3 \cdot 5 - 8)$ |

20. $35 + 4^2 - (6 - 3)$

21. $6 \cdot 7 - 3 \cdot (4 + 1)$

22. \$93 23. \$19

Review for Mastery

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|-----------|----------|
| 1. 48; 46 | 2. 5; 25 |
| 3. 45; 9 | 4. 13 |
| 5. 3 | 6. 8 |
| 7. 0 | 8. 9 |
| 9. 1 | 10. 17 |
| 11. 4 | 12. 1 |

Challenge

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|--|----------|
| 1. \$313 | 2. \$342 |
| 3. \$268 | 4. \$180 |
| 5. $7(5 \cdot 12) + 11(4 \cdot 12)$; \$948 | |
| 6. $7(5 \cdot 12) + 11(4 \cdot 12) + 35$; \$983 | |
| 7. $12(5 \cdot 12) + 18(4 \cdot 12) - [7(5 \cdot 12) + 11(4 \cdot 12) + 35]$; \$601 | |
| 8. \$577 | |

Problem Solving

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|---|------|
| 1. $35 \cdot 2.10 - 12$; \$61.50 | |
| 2. $3 \cdot 3.50 + 4 \cdot 3$; \$22.50 | |
| 3. \$324 per week | |
| 4. She has \$31 left. | |
| 5. B | 6. F |
| 7. C | 8. J |

Reading Strategies

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| 1. divide $\rightarrow$ multiply $\rightarrow$ subtract $\rightarrow$ add |
| 2. 7 |
| 3. parentheses $\rightarrow$ multiply $\rightarrow$ add $\rightarrow$ exponents $\rightarrow$ subtract |
| 4. 15 |
| 5. parentheses $\rightarrow$ divide $\rightarrow$ add $\rightarrow$ exponent $\rightarrow$ subtract |
| 6. 45 |