Name _____ Date _____ Class _____

LESSON 1-5

Practice C

Order of Operations

Simplify each expression.

1. $25 \bullet 3 + 60 \bullet 2$ _____

2. $350 \div 5 + 12 \bullet 7$ _____

3. $3 \bullet 9 + 96 \div 4$ _____

4. $77 - 42 \div 7^1$ _____

5. $532 - 2^5 \div 4$ _____

6. $3(20 - 4^2) + 7$ _____

7. $270 \div 6 + 6^2$ _____

8. $(5 + 6)^2 + 18 \div 2$ _____

9. $10^2 - 25 \bullet 3 \div 5$ _____

10. $65 - 4^3 \bullet 1^7$ _____

11. $40 - (5 \bullet 2) + 8$ _____

12. $(6^2 + 4) \div 5$ _____

13. $2^4 \div 8 + 5$ _____

14. $(1 + 2)^2 \bullet (3 - 1)^2 \div 2$ _____

15. $(16 \div 4) + 4 \bullet (2^2 - 2)$ _____

Insert grouping symbols to make each statement true.

16. $18 + 2 \bullet 1 + 3^2 = 38$ _____

17. $4 \bullet 2 - 2^2 \div 9 + 2 = 6$ _____

18. $3^3 - 9 \bullet 2 + 1 = 8$ _____

19. $2^3 - 3 \bullet 5 - 8 = 1$ _____

20. $35 + 4^2 - 6 - 3 = 48$ _____

21. $6 \bullet 7 - 3 \bullet 4 + 1 = 27$ _____

22. A group of students charges \$7 to clean the exterior and \$6 to clean the interior of a car. They clean 9 exteriors and 5 interiors. Simplify the expression $7 \bullet 9 + 6 \bullet 5$ to find out how much money the students raised in all.

_____

23. Ariel has \$65. She buys 5 books that cost \$8.00 each, a bookmark that costs \$2.00, and a magazine that costs \$4.00. Simplify the expression $65 - (5 \bullet 8 + 2 + 4)$ to find out how much money Ariel has left.

_____

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LESSON 1-5

Practice A

Order of Operations

Choose the letter for the best answer.

1. $75 + 12 \cdot 2$
A 87 **B** 99 **C** 108 **D** 174

2. $100 - 25 \div 5$
F 15 **G** 75 **H** 80 **J** 95

3. $50 - 18 \div 6 + 2$
A 49 **B** 40 **C** 10 **D** 4

4. $72 - 4^2 \cdot 2$
F 32 **G** 40 **H** 56 **J** 64

5. $(8 + 22) \div 5 + 5$
A 30 **B** 17.4 **C** 11 **D** 3

6. $3^3 - (9 \cdot 2 + 1)$
F 19 **G** 10 **H** 8 **J** −10

Simplify each expression.

7. $2^4 \div 8 + 5$ — 7

8. $18 + 2(1 + 3^2)$ — 38

9. $(16 \div 4) + 4 \cdot (2^2 - 2)$ — 12

10. $2^3 - (3 \cdot 5 - 8)$ — 1

11. $35 + 4^2 - (6 - 3)$ — 48

12. $6 \cdot 7 - 3(4 + 1)$ — 27

13. $100 \div 5 \cdot 2^2$ — 80

14. $(5 + 2)^2 \div 7 - 6$ — 1

15. $15 - 3 \cdot 4 \div 2 + 5$ — 14

16. Leon rents a video game for $5. He returns the video game 3 days late. The late fee is $1 for each day late. Simplify the expression $5 + 3 \cdot 1$ to find out how much it costs Leon to rent the video game.

$8

17. Olivia shovels snow for 6 neighbors. Each neighbor pays her $8. Two neighbors each give her a $2 tip as well. Simplify the expression $6 \cdot 8 + 2 \cdot 2$ to find out how much money Olivia earns in all.

$52

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LESSON 1-5

Practice B

Order of Operations

Simplify each expression.

1. $15 \cdot 3 + 12 \cdot 2$ — 69

2. $212 + 21 \div 3$ — 219

3. $9 \cdot 3 - 18 \div 3$ — 21

4. $65 - 36 \div 3$ — 53

5. $100 - 9^2 + 2$ — 21

6. $3 \cdot 5 - 45 \div 3^2$ — 10

7. $54 \div 6 + 4 \cdot 6$ — 33

8. $(6 + 5) \cdot 16 \div 2$ — 88

9. $60 - 8 \cdot 12 \div 3$ — 28

10. $45 - 3^2 \cdot 5$ — 0

11. $52 - (8 \cdot 2 \div 4) + 3^2$ — 57

12. $(2^3 + 10 \div 2) \cdot 3$ — 39

13. $25 + 7(18 - 4^2)$ — 39

14. $(6 \cdot 3 - 12)^2 \div 9 + 7$ — 11

15. $4^3 - (3 + 12 \cdot 2 - 9)$ — 46

16. $2^4 \div 8 + 5$ — 7

17. $(1 + 2)^2 \cdot (3 - 1)^2 \div 2$ — 18

18. $(16 \div 4) + 4 \cdot (2^2 - 2)$ — 12

19. $2^5 - (3 \cdot 7 - 7)$ — 18

20. $75 + 5^2 - (8 - 3)$ — 95

21. $9 \cdot 6 - 5(10 - 3)$ — 19

22. $96 \div 4 + 5 \cdot 2^2$ — 44

23. $(15 - 6)^2 \div 3 - 3^3$ — 0

24. $19 - 8 \cdot 5 \div 10 + 6 \div 3$ — 17

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.

$10

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.

$22

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LESSON 1-5

Practice C

Order of Operations

Simplify each expression.

1. $25 \cdot 3 + 60 \cdot 2$ — 195

2. $350 \div 5 + 12 \cdot 7$ — 154

3. $3 \cdot 9 + 96 \div 4$ — 51

4. $77 - 42 \div 7^1$ — 71

5. $532 - 2^5 \div 4$ — 524

6. $3(20 - 4^2) + 7$ — 19

7. $270 \div 6 + 6^2$ — 81

8. $(5 + 6)^2 + 18 \div 2$ — 130

9. $10^2 - 25 \cdot 3 \div 5$ — 85

10. $65 - 4^3 \cdot 1^7$ — 1

11. $40 - (5 \cdot 2) + 8$ — 38

12. $(6^2 + 4) \div 5$ — 8

13. $2^4 \div 8 + 5$ — 7

14. $(1 + 2)^2 \cdot (3 - 1)^2 \div 2$ — 18

15. $(16 \div 4) + 4 \cdot (2^2 - 2)$ — 12

Insert grouping symbols to make each statement true.

16. $18 + 2 \cdot 1 + 3^2 = 38$ — $18 + 2(1 + 3^2)$

17. $4 \cdot 2 - 2^2 \div 9 + 2 = 6$ — $(4 \cdot 2 - 2)^2 \div 9 + 2$

18. $3^3 - 9 \cdot 2 + 1 = 8$ — $3^3 - (9 \cdot 2 + 1)$

19. $2^3 - 3 \cdot 5 - 8 = 1$ — $2^3 - (3 \cdot 5 - 8)$

20. $35 + 4^2 - 6 - 3 = 48$ — $35 + 4^2 - (6 - 3)$

21. $6 \cdot 7 - 3 \cdot 4 + 1 = 27$ — $6 \cdot 7 - 3 \cdot (4 + 1)$

22. A group of students charges $7 to clean the exterior and $6 to clean the interior of a car. They clean 9 exteriors and 5 interiors. Simplify the expression $7 \cdot 9 + 6 \cdot 5$ to find out how much money the students raised in all.

$93

23. Ariel has $65. She buys 5 books that cost $8.00 each, a bookmark that costs $2.00, and a magazine that costs $4.00. Simplify the expression $65 - (5 \cdot 8 + 2 + 4)$ to find out how much money Ariel has left.

$19

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LESSON 1-5

Reteach

Order of Operations

To help you remember the order of operations use the phrase "**P**lease **E**xcuse **M**y **D**ear **A**unt **S**ally."

P: first, **p**arentheses (if any)
E: second, **e**xponents (if any)
M and **D**: then, **m**ultiplication and **d**ivision, in order from left to right
A and **S**: finally, **a**ddition and **s**ubtraction, in order from left to right

Evaluate. $39 \div (9 + 4) + 5 - 2^2$

Parentheses → $39 \div 13 + 5 - 2^2$

Exponents → $39 \div 13 + 5 - 4$

Multiply and divide from left to right → $3 + 5 - 4$

Add and subtract from left to right → $8 - 4 = 4$

Simplify each expression.

1. $12 \cdot 4 - 2$ — 48 − 2 — 46

2. $15 \div 3 \cdot 5$ — 5 • 5 — 25

3. $15 \cdot 3 \div 5$ — 45 ÷ 5 — 9

4. $8 + 20 \div 4$ — 13

5. $5 - 2 \cdot 6 \div 4 + 1$ — 3

6. $3^2 + 6 \cdot 4 - 5^2$ — 8

7. $1 + 4 \cdot 9 \div 6 - 7$ — 0

8. $18 \div (6 \div 3)$ — 9

9. $(18 \div 6) \div 3$ — 1

10. $4 \cdot 5 + 8 \div 2 - 7$ — 17

11. $2 \cdot 3 - 8 \div 2^2$ — 4

12. $8(7 - 6) \div 2^3$ — 1

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