

## LESSON

## 4

**Algebraic Reasoning****Practice B: Translating Words Into Math**

**Write each phrase as an algebraic expression.**

1. 125 decreased by a number
2. 359 more than  $z$
3. the product of a number and 35
4. the quotient of 100 and  $w$
5. twice a number, plus 27
6. 12 less than 15 times  $x$
7. the product of  $e$  and 4, divided by 12
8.  $y$  less than 18 times 6
9. 48 more than the quotient of a number and 64
10. 500 less than the product of 4 and a number
11. the quotient of  $p$  and 4, decreased by 320
12. 13 multiplied by the amount 60 minus  $w$
13. the quotient of 45 and the sum of  $c$  and 17
14. twice the sum of a number and 600
15. There are twice as many flute players as there are trumpet players in the band. If there are  $n$  flute players, write an algebraic expression to find out how many trumpet players there are.
16. The Nile River is the longest river in the world at 4,160 miles. A group of explorers traveled along the entire Nile in  $x$  days. They traveled the same distance each day. Write an algebraic expression to find each day's distance.
17. A slice of pizza has 290 calories, and a stalk of celery has 5 calories. Write an algebraic expression to find out how many calories there are in  $a$  slices of pizza and  $b$  stalks of celery.
18. Grant pays 10¢ per minute plus \$5 per month for telephone long distance. Write an algebraic expression for  $m$  minutes of long-distance calls in one month.

### Practice C

1. 56
3. 25
5. 28
7. 232
9. 4
11. 65
13. 78
15. 48 cubic inches
16. 32 seconds longer
2. 30
4. 82
6. 73
8. 102
10. 5,000
12. 191
14. 23

### Review for Mastery

1. 10
3. 6; 2
5. 5; 15; 13
7. 2
9. 5
11. 7
13. 70
15. 3
2. 13; 8
4. 12; 9; 21
6. 4; 4; 20; 4; 24
8. 20
10. 13
12. 11
14. 25

### Challenge

1.  $n + 28$ ;  $36 - n$ ;  $8n$ ;  $128 \div n$
2.  $n + 84$ ;  $108 - n$ ;  $8n$ ;  $1,152 \div n$
3.  $n + 150$ ;  $162 - n$ ;  $26n$ ;  $936 \div n$
4.  $n + 84$ ;  $112 - n$ ;  $7n$ ;  $1,372 \div n$
5.  $n + 45$ ;  $69 - n$ ;  $4.75n$ ;  $684 \div n$
6.  $n + 124$ ;  $372 - n$ ;  $2n$ ;  $30,752 \div n$

### Problem Solving

1. about 116 hours
2. 52; 1,508 hours
4. 144 miles
6. F
8. H
3. 2037
5. C
7. D

### Reading Strategies

1.  $p$  and  $t$
3. multiplication
5. addition
7. 28
2.  $8 + 4(6) - 2(2)$
4.  $8 + 24 - 4$
6.  $32 - 4$

### Puzzles, Twisters & Teasers



SPLASH

### Answers for Lesson 4

#### Practice A

1.  $m + 8$
3.  $x - 4$
5.  $52k$
7.  $13 + e$
9.  $15 \div b + 6$
11.  $26 + 12s$
13.  $3h + 20$
15.  $6z - 32$
17.  $740 \div n$
19.  $2v$
2.  $3n$
4.  $a \div 12$
6.  $15 - w$
8.  $5p + 10$
10.  $y \div 2 - 12$
12.  $2a - 6$
14.  $4n - 18$
16.  $25m$
18.  $1,719 + n$

#### Practice B

1.  $125 - n$
3.  $35f$
5.  $2r + 27$
7.  $4e \div 12$
9.  $m \div 64 + 48$
11.  $p \div 4 - 320$
13.  $45 \div (c + 17)$
15.  $n \div 2$
17.  $290a + 5b$
2.  $z + 359$
4.  $100 \div w$
6.  $15x - 12$
8.  $18 \cdot 6 - y$
10.  $4t - 500$
12.  $13(60 - w)$
14.  $2(d + 600)$
16.  $4,160 \div x$
18.  $0.10m + 5$

#### Practice C

1.  $6n^2$
3.  $4(r + 6,008)$
2.  $(6n)^2$