EXTRA PRACTICE - Exercises

Unit I – The Structure of Mathematics
Part C – Further Investigation of Operation Symbols
Lesson 2 – Properties of Operations

Identify completely the property of operations illustrated by each of the following.

1. $8 \ (7 \ 6) = (8 \ 7) \ 6$

2. $5(40 + 2) = 5 \ 40 + 5 \ 2$

3. $4 \ 2 \ 8 \ 5 = (4 \ 2) \ (8 \ 5)$

4. $6(3x) = (6 \ 3)x$

5. $4(2.3 + 4.9) = 4(2.3) + 4(4.9)$

6. $23 + (17 + 34) = (23 + 17) + 34$

7. $1.68 + 0.6 + 0.32 = 1.68 + 0.32 + 0.6$

8. $8 \ (7 \ 6) = (7 \ 6) \ 8$

9. $5 \ (12 \ 4) = 5 \ (4 \ 12)$

10. $6 \ 380 = 6(300 + 80) = 6 \ 300 + 6 \ 80$

Use the appropriate property or properties in each of the following to perform the computation mentally. Be sure to identify each property you use.

11. $17 + 7 + 16 + 3 + 4 + 3 + 8$

12. $2.8 + 4.7 + 7.2$

13. $\dfrac{1}{3} \ \dfrac{2}{7} \ 18 \ 14$

14. $2 + 21 + 8 + 7\dfrac{1}{2} + 9 + 2\dfrac{1}{2}$

15. $2 \ (137 \ 5)$

16. $25 \ 13 \ 4 \ 2$

17. $^-8.5 + \left(^-1\right)\left[\left(^-3\right) + \left(^-2.5\right)\right]$

18. $\dfrac{9}{4} \ \dfrac{8}{5} \ \dfrac{4}{9} \ 15$

19. $99\dfrac{4}{9} + 6\dfrac{2}{5} + 3\dfrac{1}{5} + \dfrac{5}{9}$

20. $430 + 18 + 70 + 22$

EXTRA PRACTICE — Answer Key

Unit I – The Structure of Mathematics
Part C – Further Investigation of Operation Symbols
Lesson 2 – Properties of Operations

Identify completely the property of operations illustrated by each of the following.

1. Associative Property of Multiplication

2. Distributive Property of Multiplication to Addition

3. Associative Property of Multiplication

4. Associative Property of Multiplication

5. Distributive Property of Multiplication to Addition

6. Associative Property of Addition

7. Commutative Property of Addition

8. Commutative Property of Multiplication

9. Commutative Property of Multiplication

10. Distributive Property of Multiplication to Addition

Use the appropriate property or properties in each of the following to perform the computation mentally. Be sure to identify each property you use.

11.   58, Commutative Property of Addition

12.   14.7, Commutative Property of Addition

13.   24, Commutative Proptery of Multiplication

14.   50, Commutative Property of Addition

15.   1370, Commutative Property of Multiplication and Associative Property of Multiplication

16.   2600, Commutative Property of Multiplication

17.   ⁻3, Distributive Property of Multiplication to Addition and Commutative Property of Addition

18.   24, Commutative Property of Multiplication and Multiplication Property of 1

19.   109 3/5, Commutative Property of Addition

20.   540, Commutative Property of Addition