Mathematical Reasoning for Elementary Teachers Media Update 7th edition Long Test Bank

SKU: 9780134758824-TEST-BANK

CHAPTER 2 FORM A

Name_____

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

Let A = {1, 3, 5, 7}, B = {5, 6, 7, 8}, C = {5, 8}, D = {2, 5, 8}, and U = {1, 2, 3, 4, 5, 6, 7, 8}. Decide if the set relationship is true or false.

1) $D \subseteq B$ 1) _____

A) True B) False

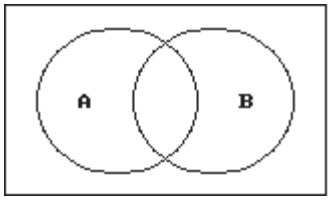
Decide if the sets are equivalent to one another.

2) {0, 8, 11, 15} and {8, 11, 15} 2) _____

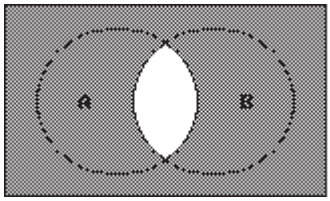
A) Not equivalent B) Equivalent

Draw and shade a Venn diagram that corresponds to the set.

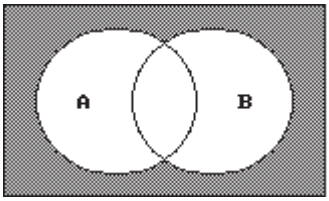
3) $\overline{A} \cup \overline{B}$ 3) _____



A)



B)



Place parentheses, if needed, to turn this into a true statement.

4) 5 - 2 - 2 = 5 4) _____

A) 5 – (2 - 2) = 5 B) No parentheses needed

C) (5 - 2 - 2) = 5 D) (5 - 2) - 2 = 5

Classify by type (cardinal, ordinal, or nominal) the number that appears in the sentence.

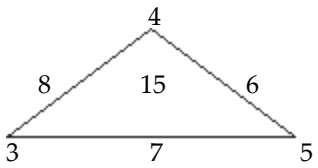
5) The math assignment is on page 594. 5) _____

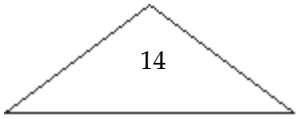
A) Cardinal B) Ordinal C) Nominal

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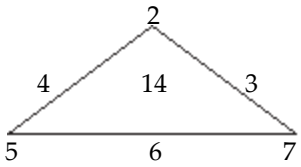
Solve the problem.

6) Follow the pattern in the triangle on the left to place the numbers 2, 3, 4, 5, 6, 7, in the triangle on the right. 6) _____

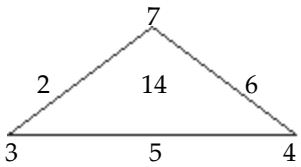




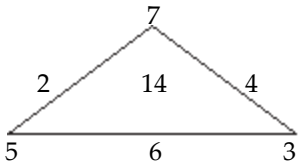
A)



B)



C)



Identify the multiplication model that best fits the problem. Do not solve the problem.

7) Kari drives 12 miles round trip each day to work. If she works 4 days each week, how many miles each week does she drive to work? 7) _____

A) Array model
B) Set model
C) Cartesian product model
D) Measurement model

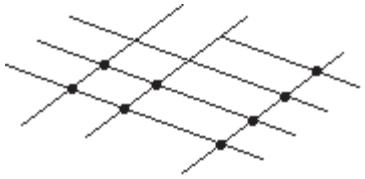
Illustrate and find the product by the indicated method.

8) A = {i, a} and B = {t, d, m}. Use a crossing–line pattern to find A × B. 8) _____

A) {i, a} × {t, d, m} = 6



B) {i, t} × {a, d} × {m} = 8



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Decide if the set is finite.

9) {x|x is an odd counting number} 9) _____

A) Finite B) Infinite

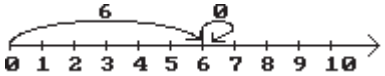
A and B designate finite sets. Decide whether the statement is true or false.

10) $n(A \cap B) = n(B \cap A)$ 10) _____

A) True B) False

Answer the question.

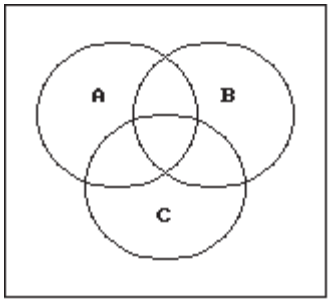
11) Which property of addition of whole numbers is illustrated? 11) _____



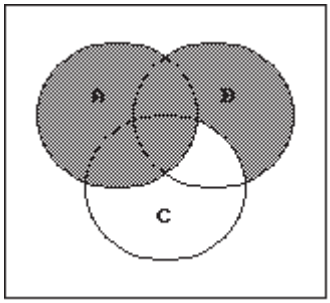
A) Additive–identity property
B) Associative property
C) Commutative property

Draw and shade a Venn diagram that corresponds to the set.

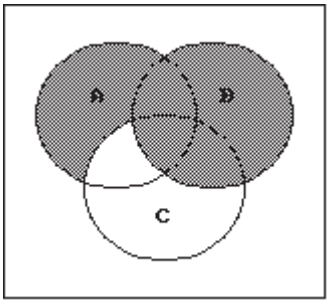
12) $A \cup (B \cap \overline{C})$ 12) _____



A)



B)



Which subtraction model (take–away, missing addend, comparison, or measurement) corresponds best to the problem?

13) A coffee can comes packed with enough ground coffee to make 85 cups of coffee. After 55 cups have been made, how many cups of coffee can be made with the remaining ground coffee? 13) _____

A) Take–away B) Comparison
C) Measurement D) Missing addend

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Solve the problem.

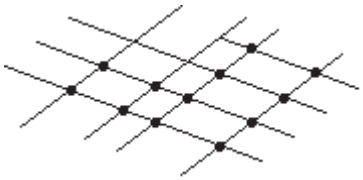
14) Rewrite the following in the form of a single exponential: $14^2 \cdot 14^3$ 14) _____

A) 14^6 B) 70 C) 14^5 D) 6

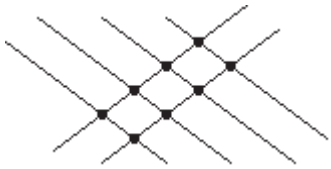
Illustrate and find the product by the indicated method.

15) A = {3, 5, 7, 6} and B = {0, 1}. Use crossing-line pattern to find A × B. 15) _____

A) {3, 0} × {5,1} × {7, 6} = 12



B) {3, 5, 7, 6} × {0, 1} = 8



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Complete the puzzle, as instructed.

16) Insert numbers so that all rows, columns, and diagonals sum to the same constant. 16) _____

	12	
16	18	20
		14

A)

B)

22	12	20
16	18	20
16	24	14

C)

22	12	20
16	18	20
16	24	12

D)

14	12	20
16	18	20
16	24	14

22	12	20
16	18	20
20	24	14

Let A = {1, 3, 5, 7}, B = {5, 6, 7, 8}, C = {5, 8}, D = {2, 5, 8}, and U = {1, 2, 3, 4, 5, 6, 7, 8}. Decide if the set relationship is true or false.

17) $A \neq \{7, 5, 3, 1\}$ 17) _____

A) True B) False

Answer the question.

18) Draw number strips to illustrate 3 + 5 = 8. 18) _____

A) B) C)



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Identify the multiplication model that best fits the problem. Do not solve the problem.

19) Suppose there are 2 roads connecting town A to town B and 3 roads connecting town B to town C. In how many ways can a person travel from A to C via B? 19) _____

A) Measurement model
B) Cartesian product model
C) Set model
D) Array model

Place parentheses, if needed, to turn this into a true statement.

20) $4 + 9 - 4 = 9$ 20) _____

A) $(4 + 9) - 4 = 9$
B) No parentheses needed
C) $(4 + 9 - 4) = 9$
D) $4 + (9 - 4) = 9$

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1) B
2) A
3) A
4) A
5) B
6) C
7) D
8) A
9) B
10) A
11) A
12) A
13) D
14) C
15) B
16) A
17) B
18) C
19) B
20) B

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