# Chapter 16: Preparation for Algebra

## PROBLEM SET 54 [PAGE 86]

### Problem Set 54 | Q 1 | Page 86
Using brackets, write three pairs of numbers whose sum is 13. Use them to write three equalities.

*SOLUTION*

(7 + 6), (8 + 5), (9 + 4).

since 7 + 6 = 13, 8 + 5 = 13, 9 + 4 = 13.

(7 + 6) = (8 + 5), (7 + 6) = (9 + 4) or (8 + 5) = (9 + 4).

### Problem Set 54 | Q 2 | Page 86
Find four pairs of numbers, one for each of addition, subtraction, multiplication, and division that make the number 18. Write the equalities for each of them.

*SOLUTION*

(9 + 9), (20 - 2), (9 x 2), (36 + 2).

since 9 + 9 = 18, 20 - 2 = 18, 9 x 2 = 18 and 36 + 2 = 18,

so (9 + 9) = (20 - 2) = (9 x 2) = (36 + 2).

## PROBLEM SET 55 [PAGES 87 - 88]

### Problem Set 55 | Q 1.01 | Page 87

**Say whether right or wrong.**
(23 + 4) = (4 + 23)

*SOLUTION*

27 = 27 is right.

### Problem Set 55 | Q 1.02 | Page 87
**Say whether right or wrong.**
(9 + 4) > 12

*SOLUTION*

13 > 12 is right.

### Problem Set 55 | Q 1.03 | Page 87
**Say whether right or wrong.**
(9 + 4) < 12

*SOLUTION*

13 < 12 is wrong.

**Problem Set 55 | Q 1.04 | Page 87**
**Say whether right or wrong.**
138 > 138

*SOLUTION*

**Wrong.**

**Problem Set 55 | Q 1.05 | Page 88**
**Say whether right or wrong.**
138 < 138

*SOLUTION*

**Wrong.**

**Problem Set 55 | Q 1.06 | Page 88**
**Say whether right or wrong.**
138 = 138

*SOLUTION*

**right.**

**Problem Set 55 | Q 1.07 | Page 88**
**Say whether right or wrong.**
(4 × 7) = 30 – 2
*SOLUTION*

28 = 28 is right.

**Problem Set 55 | Q 1.08 | Page 88**

**Say whether right or wrong.**

$\frac{25}{5} > 5$

*SOLUTION*

$\frac{25}{5} = 5$

5 > 5 is wrong.

**Problem Set 55 | Q 1.09 | Page 88**

**Say whether right or wrong.**
(5 × 8) = (8 × 5)

*SOLUTION*

40 = 40 is right.

**Problem Set 55 | Q 1.10 | Page 88**
**Say whether right or wrong.**
(16 + 0) = 0

*SOLUTION*

16 + 0 = 16

16 = 0 is wrong.

**Problem Set 55 | Q 1.11 | Page 88**
**Say whether right or wrong.**
(16 + 0) = 16

*SOLUTION*

16 = 16 is right.

**Problem Set 55 | Q 1.12 | Page 88**
**Say whether right or wrong.**
(9 + 4) = 12

*SOLUTION*

13 = 12 is wrong.

**Problem Set 55 | Q 2.1 | Page 88**
**Fill in the blank with the right symbol from <, > or =.**
(45 ÷ 9) _____ (9 – 4).

1. <
2. >
3. **=**

*SOLUTION*

45 + 9 = 5, 9 - 4 = 5

5 = 5

so, (45 + 9) **=** (9 - 4).

**Problem Set 55 | Q 2.2 | Page 88**
**Fill in the blank with the right symbol from <, > or =.**
(6 + 1) _____ (3 × 2)

1. <

2. >
3. =

*SOLUTION*

6 + 1 = 7, 3 x 2 = 6

7 > 6

SQ, (6 + 1) > (3 × 2).

**Problem Set 55 | Q 2.3 | Page 88**
**Fill in the blank with the right symbol from <, > or =.**
(12 × 2) _____ (25 + 10)

1. <
2. >
3. =

*SOLUTION*

12 x 2 = 24, 25 + 10 = 35

24 < 35

so, (12 x 2) < (25 + 10).

**Problem Set 55 | Q 3.1 | Page 88**
**Fill in the blank in the expression with the proper number.**
(1 × 7) = (_____ × 1)

*SOLUTION*

1 x 7 = 7, 7 x 1 = 7

so, (1 x 7) = (**7** x 1).

**Problem Set 55 | Q 3.2 | Page 88**
**Fill in the blank in the expression with the proper number.**
(5 × 4) > (7 × _____)

*SOLUTION*

5 x 4 = 20, 7 x _____ must be less than 20.

7 x 2 = 14

so, (5 x 4) > (7 x **2**).

**Problem Set 55 | Q 3.3 | Page 88**
**Fill in the blank in the expression with the proper number.**
(48 ÷ 3) < (_____ × 5)

*SOLUTION*

48 ÷ 3 = 16, 5 x 4 = 20

5 x 3 = 15

16 > 15 and 16 < 20

so, (48 ÷ 3) < (**4** x 5).

**Problem Set 55 | Q 3.4 | Page 88**
**Fill in the blank in the expression with the proper number.**
(0 + 1) > (5 × _____)

*SOLUTION*

0 + 1 = l, 5 x 1 = 5

5 x 0 =0

1< 5 and 1 > 0

so, (0 + 1) > (5 x **0**)

**Problem Set 55 | Q 3.5 | Page 88**
**Fill in the blank in the expression with the proper numbers.**
(35 ÷ 7) = (_____ + _____)

*SOLUTION*

35 ÷ 7 = 5, 3 + 2 = 5

So, (35 ÷ 7) = (**3** + **2**).

**Problem Set 55 | Q 3.6 | Page 88**
**Fill in the blank in the expression with the proper number.**
(6 – _____) < (2 + 3)

*SOLUTION*

6 - _____, < 2 + 3 = 5

5 > 6 - 2

so, (6 - **2**) < (2 + 3).

## PROBLEM SET 56 [PAGE 88]

**Problem Set 56 | Q 1.1 | Page 88**

**Use a letter for ‘any number’ and write the following property in short.**
The sum of any number and zero is the number itself.

*SOLUTION*

a + 0 = a.

**Problem Set 56 | Q 1.2 | Page 88**
**Use a letter for ‘any number’ and write the following property in short.**
The product of any two numbers and the product obtained after changing the order of those numbers is the same.

*SOLUTION*

a x b = b x a.

**Problem Set 56 | Q 1.3 | Page 88**
**Use a letter for ‘any number’ and write the following property in short.**
The product of any number and zero is zero.

*SOLUTION*

a x 0 = 0.

**Problem Set 56 | Q 2.1 | Page 88**
**Write the following property in words :**
m – 0 = m

*SOLUTION*

Subtracting zero from any number gives the number itself.

**Problem Set 56 | Q 2.2 | Page 88**
**Write the following property in words :**
n ÷ 1 = n

*SOLUTION*

Dividing any number by 1 gives the number itself.