Access NCERT Solutions for Class 6 Chapter 11: Algebra Exercise 11.3

1. Make up as many expressions with numbers (no variables) as you can from three numbers 5, 7 and 8. Every number should be used not more than once. Use only addition, subtraction and multiplication.

Solutions:

Some of the expressions formed by 5, 7 and 8 are as follows

5 × (8 – 7)

5 × (8 + 7)

(8 + 5) × 7

(8 – 5) × 7

(7 + 5) × 8

(7 – 5) × 8

2. Which out of the following are expressions with numbers only?

(a) y + 3

(b) (7 × 20) – 8z

(c) 5 (21 – 7) + 7 × 2

(d) 5

(e) 3x

(f) 5 – 5n

(g) (7 × 20) – (5 × 10) – 45 + p

Solutions:

(c) and (d) are the expressions with numbers only.

3. Identify the operations (addition, subtraction, division, multiplication) in forming the following expressions and tell how the expressions have been formed.

(a) z + 1, z – 1, y + 17, y – 17

(b) 17y, y / 17, 5z

(c) 2y + 17, 2y – 17

(d) 7m, -7m + 3, -7m – 3

Solutions:

(a) z + 1 = 1 is added to z = Addition

z – 1 = 1 is subtracted from z = Subtraction

y + 17 = 17 is added to y = Addition

y – 17 = 17 is subtracted from y = Subtraction

(b) 17y = y is multiplied by 17 = Multiplication

y / 17 = y is divided by 17 = Division

5z = z is multiplied by 5 = Multiplication

(c) 2y + 17 = y is multiplied by 2 and 17 is added to the result = Multiplication and addition

2y – 17 = y is multiplied by 2 and 17 is subtracted from the result = Multiplication and subtraction

(d) 7m = m is multiplied by 7 = multiplication

-7m + 3 = m is multiplied by -7 and 3 is added to the result = Multiplication and addition

-7m – 3 = m is multiplied by -7 and 3 is subtracted from the result = Multiplication and subtraction

4. Give expressions for the following cases.

(a) 7 added to p

(b) 7 subtracted from p

(c) p multiplied by 7

(d) p divided by 7

(e) 7 subtracted from –m

(f) –p multiplied by 5

(g) –p divided by 5

(h) p multiplied by -5

Solutions:

(a) 7 is added to p is (p + 7)

(b) 7 subtracted from p is (p – 7)

(c) p multiplied by 7 is (7p)

(d) p divided by 7 is (p / 7)

(e) 7 subtracted from –m is (-m – 7)

(f) –p multiplied by 5 is (-5p)

(g) –p divided by 5 is (–p / 5)

(h) p multiplied by -5 is (-5p)

5. Give expressions in the following cases.

(a) 11 added to 2m

(b) 11 subtracted from 2m

(c) 5 times y to which 3 is added

(d) 5 times y from which 3 is subtracted

(e) y is multiplied by -8

(f) y is multiplied by -8 and then 5 is added to the result

(g) y is multiplied by 5 and the result is subtracted from 16

(h) y is multiplied by -5 and the result is added to 16.

Solutions:

(a) 11 added to 2m is (2m + 11)

(b) 11 subtracted from 2m is (2m – 11)

(c) 5 times y to which 3 is added is (5y + 3)

(d) 5 times y from which 3 is subtracted is (5y – 3)

(e) y is multiplied by -8 is (-8y)

(f) y is multiplied by -8 and then 5 is added to the result is (-8y + 5)

(g) y is multiplied by 5 and the result is subtracted from 16 is (16 – 5y)

(h) y is multiplied by -5 and the result is added to 16 is (-5y + 16)

6. (a) Form expressions using t and 4. Use not more than one number operation. Every expression must have t in it.

(b) Form expressions using y, 2 and 7. Every expression must have y in it. Use only two number operations. These should be different.

Solutions:

(a) (t + 4), (t – 4), 4t, (t / 4), (4 / t), (4 – t), (4 + t) are the expressions using t and 4

(b) 2y + 7, 2y – 7, 7y + 2,…

are the expression using y, 2 and 7