

**Class.6.Maths Solution(By:Prashant Kr)**

**11.Algebra**

**Ex-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

$$5 \times (8 - 7)$$

$$5 \times (8 + 7)$$

$$(8 + 5) \times 7$$

$$(8 - 5) \times 7$$

$$(7 + 5) \times 8$$

$$(7 - 5) \times 8$$

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

(a)  $y + 3$

(b)  $(7 \times 20) - 8z$

(c)  $5(21 - 7) + 7 \times 2$

(d)  $5$

(e)  $3x$

(f)  $5 - 5n$

(g)  $(7 \times 20) - (5 \times 10) - 45 + p$

**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