



Algebra-Grade 6

Q1) Write the expression for each of the following: 5

i) 2 times x to which 1 is added

ii) 1 subtracted from 2k

iii) P divided by 2 and result is added to 5

iv) M divided by -2 and result is multiplied by 4

v) Product of 6 and g is added to Product of m and n

Q2) Solve 5

i) $p + 1 = 8$

ii) $m - 5 = 4$

iii) $3w - 7 = 8$

iv) $4(x + 4) = 3(x + 6)$

v) $\frac{x}{7} + \frac{1}{2} = \frac{7}{2}$

Q3) Meera's present age is x years. What will be her age after 20 years from now? 1

Q4) Harish is two times older than Heena. If Heena's age two 3 years after will be x+3, Find Harish's Present age. 2

Q5) Cadets are marching in a parade. There are 5 cadets in a row. What is rule, which gives the number of cadets, given number of rows is r. 2



6. What does a duck do when it flies upside down? The answer to this riddle is hidden in the equation given below. 5

If $i + 69 = 70$, then $i =$

If $8u = 6u + 8$, then $u =$

If $4a = -5a + 45$, then $a =$

If $4q + 5 = 17$, then $q =$

If $-5t - 60 = -70$, then $t =$

If $\frac{1s}{4} + 98 = 100$, then $s =$

If $\frac{5p}{3} + 9 = 24$, then $p =$

If $3c = c + 12$, then $c =$

If $3(k + 1) = 24$, then $k =$

For riddle answer, substitute letters corresponding to its value.

1	2		3	4	5	6	7	8		4	9



Solutions

Solution 1) Write the expression for each of the following:

i) 2 times x to which 1 is added = $2x + 1$

ii) 1 subtracted from 2k = $2k - 1$

iii) P divided by 2 and result is added to 5 = $\frac{p}{2} + 5$

iv) M divided by -2 and result is multiplied by 5 = $-\frac{5M}{2}$

v) Product of 6 and g is added to Product of m and n = $6g + mn$

Q2) Solve

i) $p + 1 = 8$ $p = 8 - 1 = 7$

ii) $m - 5 = 4$ $m = 4 + 5 = 9$

iii) $3w - 7 = 8$

$$3w = 8 + 7$$

$$3w = 15$$

$$w = 15/3$$

$$w = 3$$

iv) $4(x + 4) = 3(x + 6)$

$$4x + 16 = 3x + 18$$

$$4x - 3x = 18 - 16$$



$$x = 2$$

$$v) \frac{x}{7} + \frac{1}{2} = \frac{7}{2}$$

$$\frac{x}{7} = \frac{7}{2} - \frac{1}{2} = \frac{6}{2}$$

$$\frac{x}{7} = 3$$

$$x = 21$$

Q3) Meera's present age is x years. What will be her age after 20 years from now?

Sol) Meera's present age = x

Meera's Age after 20 years = $x + 20$

Q4) Harish is two times older than Heena. If Heena's age three years after will be $x + 3$, Find Harish's present age

Sol) Heena's age after 3 year's = $x + 3$

Heena's present age = x

Harish's present age = $2x$

Q5) Cadets are marching in a parade. There are 5 cadets in a row. What is rule, which gives the number of cadets, given number of rows is r .

Sol)

Cadets in one row = 5

Number of rows = r

Total cadets $5r$

6. What does a duck do when it flies upside down? The answer to this riddle is hidden in the equation given below.



$$\text{If } i + 69 = 70, \text{ then } i = 70 - 69 = 1$$

$$\text{If } 8u = 6u + 8, \text{ then } 8u - 6u = 8$$

$$2u = 8$$

$$u = 4$$

$$\text{If } 4a = -5a + 45, \text{ then } 4a + 5a = 45$$

$$9a = 45$$

$$a = 5$$

$$\text{If } 4q + 5 = 17, \text{ then } 4q = 17 - 5$$

$$4q = 12$$

$$q = 3$$

$$\text{If } -5t - 60 = -70, \text{ then } -5t = -70 + 60$$

$$-5t = -10$$

$$t = 10/5$$

$$t = 2$$

$$\text{If } \frac{1s}{4} + 98 = 100, \text{ then } \frac{1s}{4} = 100 - 98$$

$$\frac{1s}{4} = 2$$

$$s = 8$$

$$\text{If } \frac{5p}{3} + 9 = 24, \text{ then } \frac{5p}{3} = 24 - 9$$

$$\frac{5p}{3} = 15$$

$$5p = 45$$

$$p = \frac{45}{5} = 9$$

$$\text{If } 3c = c + 12, \text{ then}$$

$$3c - c = 12$$

$$2c = 12$$

$$c = 6$$

$$\text{If } 3(k + 1) = 24, \text{ then } 3k + 3 = 24$$



$$3k = 24 - 3$$

$$3k = 21$$

$$k = 7$$

For riddle answer, substitute letters corresponding to its value.

l	t		q	u	a	c	k	s		u	p
1	2		3	4	5	6	7	8		4	9

scorecents