

Substitution with the Four Operations and Integers: Exercise

1 Given that $z = 6$, work out the following:

a $2z$

f $-\frac{72}{z}$

b $\frac{z}{3}$

g $-3z + 2$

c $-5z$

h $\frac{5z}{3}$

d $3 - z$

i $\frac{3z - 4}{5}$

e $4 - 2z$

j $9z - \frac{3}{z}$

2 Work out the value of....

a $4y + 11$
when $y = 2$

e $2p + 3q$
when $p = 7, q = 1$

b $4y + 11$
when $y = -7$

f $\frac{20}{y} + 3x$
when $x = \frac{1}{5}, y = 2$

c $4z + 11$
when $z = 0.5$

g $\frac{20}{x} + 3y$
when $x = \frac{1}{5}, y = 2$

d $\frac{2x - 3}{4}$
when $x = 6$

h $8p - \frac{14}{q}$
when $p = -\frac{3}{8}, q = -7$

3 You are told that $a = 5, b = -2$ and $c = 3$

As an example, $5a - 4b + c = 36$
Find expressions that equal:

a 6

d -5

b 1

e 41

c 7

f 32

4 [CCEA GCSE June 2016 T5 Paper 2
Foundation Q7c]

$$R = 2d - 3 - 4f$$

Work out the value of R when $d = 2,$
 $e = 3$ and $f = \frac{1}{2}$

5 [Edexcel IGCSE June 2021 2F Q12b, Adapted]

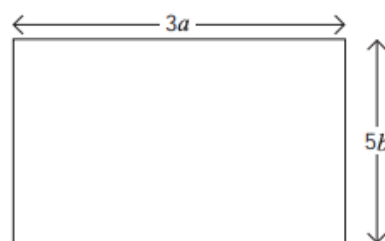
The cost, B , in riyals, of hirings a bicycle in Qatar for a number of days, N , is given by:
 $B = 65N + 44$

The cost, H , in riyals, of hiring a helmet in Qatar for a number of days, N , is given by:
 $H = 12.5N$

Kasun wants to hire a bicycle and a helmet for 8 days. Work out how many riyals Kasun will have to spend.

[AQA GCSE Nov 2014 2F Q2b/2H Q7b]

The diagram shows a rectangle.
You are given that a and b are prime numbers.



The area of the rectangle is 315cm^2 . Work out the values of a and b .