

# Algebra 1

test 3e

name.....

1) For each pattern write down the next 2 numbers

a) 68 , 55 , 42 ,

b) -12 , -18 , -24 ,

c) 1 , 4 , 9 , 16 ,

d) 2 , 8 , 18 , 32

e) 11 , 14 , 19 , 26

f) 5 , -4 , -13 ,

2) Complete these tables

a)  $y = x + x + x + x$

| x | 4 | 6 | 8 | 10 |
|---|---|---|---|----|
| y |   |   |   |    |

b)  $p = 3q^2 + 5$

| q | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| p |   |   |   |   |

c)  $m = 5n^2 + 3$

| n | 7 | 8 | 9 | 10 |
|---|---|---|---|----|
| m |   |   |   |    |

d)  $d = c + 6c$

| c | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| d |   |   |   |   |

3)  $x = 2$  ,  $y = 3$  and  $z = 9$  .  
Substitute and evaluate these expressions.

a)  $4y + 8y$

=

=

b)  $xz^2 - 3x$

=

=

c)  $(xz)^2$

=

=

d)  $2y^2 + xz$

=

=

e)  $xy + z \div 2$

=

=

4) Find the equation which describes the number pattern

a)

| x | 1  | 2  | 3  | 4 |
|---|----|----|----|---|
| y | 24 | 19 | 14 | 9 |

y =

b)

| x | 1 | 2 | 3  | 4  |
|---|---|---|----|----|
| y | 2 | 8 | 18 | 32 |

y =

c)

| x | 2 | 7  | 9  | 3 |
|---|---|----|----|---|
| y | 0 | 20 | 28 | 4 |

y =

5) Evaluate the pronumeral

a)  $a + 8 = 14$

a =

b)  $b - 9 = 20$

b =

c)  $2c = 15$

c =

d)  $d \div 7 = 12$

d =

e)  $4e + 4 = 40$

e =

f)  $f^2 + 8 = 89$

f =

g)  $5g - 4 = 96$

g =

h)  $5h + h = 72$

h =

i)  $h^2 + 2h = 63$

h =

j)  $60 - 9j = 15$

j =

k)  $13 + k^2 = 14$

k =