

Algebra and the Number Plane (2d) name

1) If $a = 8$, $b = 4$ and $c = 2$ find

a) $c^2 b - 2a$

b) $c(a^2 + b^2)$

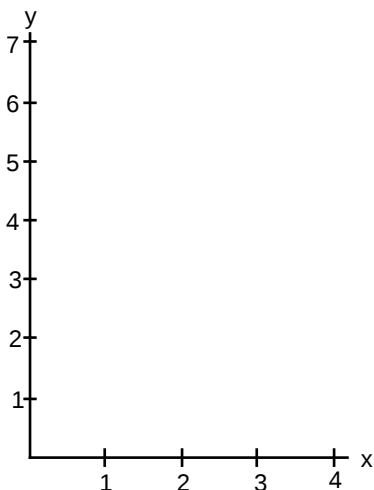
c) $(a + bc)^2$

d) $b^2 - (3c - b)$

2) Use the equation to complete the table and then plot the points

$$y = 7 - x$$

x	0	1	2	3
y				



3) Simplify

a) $4a + 8b + 3a + 8b$

=

b) $7k + 7h + 6k$

=

c) $5xy + 6g + 5xy - g$

=

d) $y \times 5 \times y \times y \times 3 \times y =$

e) $h \times h \times h \times h \times h \times h =$

f) $p \times 5 \times k \times k \times k \times p$

=

h) $p^4 \times p =$

i) $7y^3 \times 7y^6 =$

4) Expand

a) $4(y - 7) =$

b) $4(3a + 5) =$

c) $y(y + 5) =$

d) $7a(y + 5a) =$

e) $4g(5 - 2g) =$

5) Expand and simplify

$$4(3y + 4) + 3(y - 2)$$

=

=

6) Factorise

a) $2y + 10 =$

b) $7a - 35 =$

c) $24f + 16 =$

d) $k^2 + 6k =$

7) Simplify

a) $p^8 \div p^2 =$

b) $y^4 \div y =$

c) $12a^5 \div 2a^4 =$

d) $(y^3)^5 =$

e) $(8k^7)^2 =$

f) $(9y^5)^2 =$

8) Solve

a) $7a + 8 = 57$

$a =$

b) $4b - 2 = 38$

$b =$

c) $8c - 5 = 59$

$c =$

d) $(d - 3) \div 7 = 6$

$d =$

e) $30 \div e - 1 = 5$

$e =$

f) $5f + 20 = 35$

$f =$

Parent's signature and comment