

Algebra and the Number Plane (2a)

name

1) If $a = 2$, $b = 10$ and $c = 3$ find

a) $a^2 b - 3c$

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

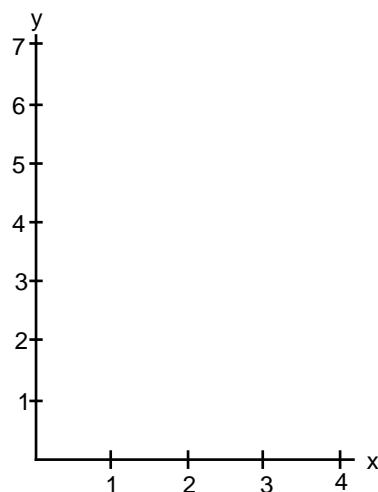
c) $(b + ac)^2$

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

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

$$y = 2x + 1$$

x	0	1	2	3
y				



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|--|--|---|
| <p>3) Simplify</p> <p>a) $6a + 5b + 5a + 2b$
=</p> <p>b) $3k + 8h + 6k$
=</p> <p>c) $7xy + 3g + 5xy - g$
=</p> <p>d) $y \times 3 \times y \times y \times 5 \times y$
=</p> <p>e) $h \times h \times h$
=</p> <p>f) $p \times p \times 9 \times k \times k \times p$
=</p> <p>g) $p^5 \times p$
=</p> <p>h) $6y^3 \times 7y^7$
=</p> | <p>6) Factorise</p> <p>a) $3y + 15$
=</p> <p>b) $10a - 15$
=</p> <p>c) $12f + 18$
=</p> <p>d) $k^2 + 3k$
=</p> <p>7) Simplify</p> <p>a) $p^6 \div p^2$
=</p> <p>b) $y^5 \div y$
=</p> <p>c) $8a^8 \div 2a^3$
=</p> <p>d) $(y^5)^2$
=</p> <p>e) $(2k^4)^3$
=</p> <p>f) $(7y^7)^2$
=</p> | <p>4) Expand</p> <p>a) $9(y - 4)$
=</p> <p>b) $6(8a + 1)$
=</p> <p>c) $y(y - 7)$
=</p> <p>d) $4a(y + 7a)$
=</p> <p>e) $8g(5 - 2g)$
=</p> <p>5) Expand and simplify</p> <p>$4(2y + 7) + 5(y - 2)$
=</p> <p>=</p> |
| <p>a) $3a + 8 = 29$
$a =$</p> <p>b) $5b - 8 = 47$
$b =$</p> <p>c) $6c - 9 = 3$
$c =$</p> <p>d) $(d - 5) \div 4 = 9$
$d =$</p> <p>e) $18 \div e - 2 = 7$
$e =$</p> <p>f) $9f + 1 = 82$
$f =$</p> | | |

Parent's signature and comment