Algebra and the Number Plane (2b)   name ....

1) If $a = 2$, $b = 6$ and $c = 5$ find
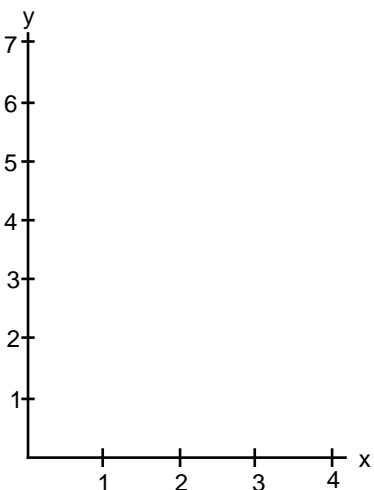
a) $a^2 b - 3c$

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

c) $(c + ac)^2$

d) $b^2 - (4c - a)$

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

$y = 2x - 1$

x	1	2	3	4
v				

3) Simplify

a) $4a + 2b + 5a + 2b$

=

b) $3k + 7h + 9k$

=

c) $5xy + 2g + 5xy - g$

=

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

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

f) $p \times 4 \times k \times k \times p$

=

h) $p^3 \times p =$

i) $5y^3 \times 7y^4 =$

4) Expand

a) $5(y - 7) =$

b) $3(8a + 5) =$

c) $y(y - 4) =$

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

e) $7g(3 - 2g) =$

5) Expand and simplify

$7(5y + 4) + 2(y - 9)$

=

=

6) Factorise

a) $5y + 15 =$

b) $10a - 12 =$

c) $12f + 15 =$

d) $k^2 + 7k =$

7) Simplify

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

b) $y^9 \div y =$

c) $4a^8 \div 2a^2 =$

d) $(y^6)^2 =$

e) $(3k^4)^3 =$

f) $(6y^5)^2 =$

8) Solve

a) $7a + 8 = 85$

   $a =$

b) $4b - 8 = 32$

   $b =$

c) $3c - 5 = 16$

   $c =$

d) $(d - 8) \div 5 = 9$

   $d =$

e) $18 \div e - 7 = 2$

   $e =$

f) $4f + 1 = 29$

   $f =$

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