

ALGEBRA TEST 2

name.....

1) Simplify

a) $3y + 7x - 2y + x$

=

b) $5a^2 + 5a + 3a - a^2$

=

c) $-4p + 7y - 3p + y$

=

d) $3y - 2y + 9h + 8y$

=

e) $-4p - q + p - 7q$

=

2)a) $y \times y \times y =$

b) $a^4 \times a^3 =$

c) $p^6 \div p^3 =$

d) $(a^4)^2 =$

e) $5y^4 \times 3y^2 =$

f) $30a^8 \div 2a^4 =$

g) $(3ay^4)^2 =$

h) $(-2p^2)^3 =$

i) $-3a^3 \times 4ab =$

j) $40m^3n \div 5mn =$

k) $\frac{27y^3}{9y} =$

3) Expand

a) $3(5a + 7) =$

b) $-4(3y - 9) =$

c) $y(3y - 4) =$

d) $5p(4p + 8) =$

e) $4a(3y - 5) =$

4) Factorise

a) $5a - 25 =$

b) $3p^2 + 9p =$

c) $12kt + 8k =$

d) $8a^2b - 6ab =$

e) $21y^2 + 24yz =$

5) Expand and simplify

a) $5(3y + 2) + 3(y - 4)$

=

=

b) $5p(2p + 6) - 3(p^2 - 1)$

=

=

c) $6(2y + 11) - 3(5y - 2)$

=

=

6) If $g(x) = 5x^2 - 1$

and $K(x) = x^2 + 2x$

Find

a) $g(4)$

b) $K(5)$

c) $g(1) + K(2)$

7) Simplify

a) $\frac{x}{6} + \frac{3x}{10}$

b) $\frac{9y^2}{2} \div \frac{8y}{6}$

c) $\frac{5}{4h} - \frac{4}{7h}$

d) $\frac{4k^4}{3r} \times \frac{9kr}{6k^7}$

e) $\frac{12xy^2 - 8y}{6xy - 4}$