/60 Algebra Assignment | MFM1P

Name:

Topic 1: Collecting Like Terms

1) Simplify the following expressions by collecting like terms.

a) $-6b + 4b =$ _____ ①

b) $-5a + 5a =$ _____ ①

c) $3x + 7x =$ _____ ①

d) $7ab - 3ab =$ _____ ①

e) $-3x^2 - 7x^2 =$ _____ ①

f) $10x^3 - x^3 =$ _____ ①

g) $x + 4x - 2x =$ _____ ①

h) $3x^2 - 4x^2 - 2x^2 =$ _____ ①

i) $6a + 5a + 3b - 5b =$ _____ ②

j) $4u - 7u + 2 + 5 =$ _____ ②

k) $3a^2 - 5a + 5 + 3a^2 + 10a + 5 =$ _____ ③

l) $8x - 2y + 7y - 5 + 4x + 3 =$ _____ ③

Topic 2: Adding and Subtracting Polynomials

2) Add or subtract the following polynomials as indicated.

a) $(2a - 2b) + (6a + 6b)$
②
=_____

=_____

b) $(6x - y) + (-2x + 4y)$
②
=_____

=_____

c) $(3m - 2) - (10m + 4)$
③
=_____

=_____

d) $(x - 5) - (x - 6)$
③
=_____

=_____

e) $(4ab + 7b) + (2b - 5ab)$
②
=_____

=_____

f) $(3x^2 - x + 5) - (-2x^2 + x + 5)$
③
=_____

=_____

g) $(2a - 3b + 4c) - (-2a - 2c)$
③
=_____

=_____

h) $(5x + 2y - 2z) + (2x - y + z)$
②
=_____

=_____

Topic 3: The Distributive Law – Part 1

3) Use the distributive law to expand. ④ marks total.

a) $3(3x + 2)$

=_____

b) $-2(x^2 - 4x + 7)$

=_____

c) $3(5x^3 - 2x^2 - 1)$

=_____

4) Use the distributive law to expand the following, and then simplify by collecting like terms. ⑥ marks total.

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

=_____

=_____

b) $3(2x - 5) - 4(2x + 5)$

=_____

=_____

Topic 4: The Distributive Law – Part 2

5) Use the distributive law to expand. ⑤ marks total.

a) $3a(4a - 2)$

=_____

b) $-x(3x + 4)$

=_____

c) $3n(3n^2 - n + 5)$

=_____

6) Use the distributive law to expand the following, and then simplify by collecting like terms. ⑦ marks total.

d) $2x(x - 2) - 4x^2 + 6x$

=_____

=_____

d) $2x(x + 3) + x(x - 4)$

=_____

=_____