

HOMEWORK 10,
December 6, 2020

*I would like to remind you that the homework should be done on a separate piece of paper.
There is not enough space on this handout to show all work. **You must show all steps!***

1. Simplify by combining like terms:

a) $2x^2 + 3x - x + 4x^2 =$

b) $-0.8b^2 + 7.4b + 5.6b - 0.2b^2 =$

c) $7.3y - y^2 + 4 + 0.5y^2 - (8.7y - 2.4y^2) =$

d) $8a^2b + (-5a^2b + 4b^2) + (a^2 - 5b^2 + 4) =$

e) $xy + x^2 + y^2 - 2x^2 - 4y^2 - 2xy - xy =$

2. Factor:

a) $3c + 15 =$

b) $-5a - 20 =$

c) $-6a - 36b =$

d) $-10 - 10c =$

e) $3by - 6b =$

f) $3a + 9ab =$

3. Distribute:

a) $(m - n)(x + c) =$

b) $(a + 3)(a - 2) =$

c) $(1 - 2a)(3a + 1) =$

d) $(5 - x)(4 - x) =$

e) $(6m - 3)(2 - 5m) =$

f) $(3y - 1)(5y + 3) =$

Solve the following word problems by writing an equation. Make sure to show all steps!

4. Five years ago, Nicholas was two-thirds as old as he will be next year. How old is Nicholas now?

5. A farm has 17 cows and chickens. Altogether, the animals have 56 legs. How of each type of animal are there at the farm?

6. If I add 5 to $\frac{1}{3}$ of a number, the result is $\frac{1}{2}$ of the number. What is the number? (*MOEMS*)