

**INTENSIVE MATHEMATICS (PBM1035)**

**Session December 2017**

**SELF-EXERCISE 9**

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Instructions

- Answer ALL questions. Write your answers in the spaces provided.
- Show your working. You may use a non-programmable scientific calculator.

1. Solve the following equations:

- (a)  $x + 9 = 20$
- (b)  $x - 8 = 10$
- (c)  $x + 1.6 = 2.4$
- (d)  $y - 2 = -8$
- (e)  $x - \frac{3}{4} = 1\frac{1}{2}$
- (f)  $m + 6 = -4$
- (g)  $m - 7.1 = -8.4$
- (h)  $x + 1\frac{1}{2} = 2$
- (i)  $y + 80 = 120$

2. Solve the following equations:

- (a)  $2x = 11$
- (b)  $4x = 20$
- (c)  $3x = -24$
- (d)  $6x = 24$
- (e)  $\frac{x}{3} = 1.2$
- (f)  $\frac{x}{5} = 5$
- (g)  $\frac{x}{2} = -7$
- (h)  $\frac{2}{5}m = 10$
- (i)  $\frac{3m}{4} = -6$

3. Solve the following equations:

- (a)  $2x - 1 = 9$
- (b)  $5(2 - x) - 3(4 - 2x) = 20$
- (c)  $2m + 4 - 3m = 8(m - 1)$
- (d)  $\frac{x+1}{4} = 5$
- (e)  $\frac{x}{5} + \frac{x}{3} = 10$
- (f)  $5(y + 2) - 4(y - 1) = 6$
- (g)  $4(y + 3) - 2y = 7$

4. Solve each of the following simultaneous equations by using (a) elimination method and (b) substitution method.

(a)  $3u + v = 15$ ;  $3u + 2v = 10$

(b)  $2a + 2x = 18$ ;  $a + 2x = 17$

(c)  $-5x + 5y = 0$ ;  $-5x + 3y = 8$

(d)  $7x + 9y = 27$ ;  $9x + 9y = 27$