

# IM2 Book 1 Selected Answers

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1.  $x = -3$

2.  $-$

3. (a)  $x(x + 4)$   
 (b)  $3x(x - 5)$   
 (c)  $-x(2x + 7)$

4. (a)  $x = 0, 4$   
 (b)  $x = 0, 5$   
 (c)  $x = 0, -\frac{7}{2}$

	$2 \leq x$	$-$	all values that are at least 2	$-$
5.	$-4 < x < 0$	$-$	$-$	$(-4, 0)$
	$x < 1$	$-$	all values that are less than 1	$(-\infty, 1)$

6. Answers may vary. Soln:  $(0, 5)$ . Non-soln:  $(0, 0)$ .

7.  $4a^2, 2a^2$

8. (a)  $-$   
 (b)  $24 \leq x$

9.  $(x + 4)(x + 1)$ . 4 and 1 add to 5 and multiply to 4.

10.  $x^2 + (q + p)x + pq$ .  $\nabla = (q + p)$ .  $\Delta = pq$ .

11. (a)  $-$   
 (b)  $37 \leq 37$   
 (c)  $-$   
 (d)  $x \geq 18$

12.  $x = 1, -4, \frac{3}{2}$

13. (a) Answers may vary.  
 System soln:  $(2, 4)$   
 Soln to one eqn but not the other:  $(0, 0)$   
 Not a system soln:  $(0, 0)$

- (b) –
- (c) One solution.