

GRADE 8 JUNE 2018 MEMO

1.1.1	False		1A
1.1.2	True		1A
1.1.3	True		1A
1.1.4	False		1A
1.1.5	True	(5)	1A
1.2	$16 = 2^4$ $56 = 2^3 \times 7$		2A
	$LCM = 2^4 \times 7 = 112$	(4)	2A
1.3.1	$-6 - 4 - 3 = -13$	(2)	2A
1.3.2	$(-6) - (-8) = -6 + 8 = 2$	(2)	1A +8 1A 2
1.3.3	$\sqrt{100} + 5 = 10 + 5 = 15$	(2)	1A 10 1A 15
1.3.4	$\sqrt[3]{64} + 3^3 = 4 + 27 = 31$	(2)	1A 4+27 1A 31
1.3.5	$\sqrt{125 - 5^2} = \sqrt{125 - 25} = \sqrt{100} = 10$	(2)	1A 100 1A 10
1.3.6	$(-3)^3 \div \sqrt[3]{-27} = -27 \div -3 = 9$	(2)	1A sub step 1A
2.	i) 8 ii) 3 iii) -21 iv) -21 v) -15 vi) -5 vii) 2 viii) -6	(8)	8A
3.1	0 ; -5 ; -37 ; 12 ; 27 ; 36 Order -37 ; -5 ; 0 ; 12 ; 27 ; 36	(3)	1A 1st 3 1A last 3 1A order
3.2	$1 + 3 \times (-2)^2 = 1 + 3 \times 4 = 13$	(2)	1A sub step 1A 13
3.3	$-6 - (-5) = -6 + 5 = -1$	(2)	1A statement 1A
3.4	$-12 - 18 = -30$	(2)	1A statement 1A
3.5	$(-1)(-1)(-1)(6)(-7) = 42$	(2)	2A
3.6	$-42 \div -7 = 6$	(2)	1A statement 1A
4.1	$\frac{4}{5} + \frac{5}{8} = \frac{32}{40} + \frac{25}{40}$ $= \frac{57}{40}$	(3)	1A 1A 1A

4.2	$6 - 2\frac{3}{4} = \frac{6}{1} - \frac{11}{4}$ $= \frac{24}{4} - \frac{11}{4}$ $= \frac{13}{4}$	(3)	1A 1A 1A
4.3	$2\frac{3}{4} \times 2\frac{2}{3} = \frac{11}{4} \times \frac{8}{3}$ $= \frac{22}{3}$	(3)	2A 1A
4.4	$6\frac{1}{2} \div 2 = \frac{13}{2} \div \frac{2}{1}$ $= \frac{13}{2} \times \frac{1}{2}$ $= \frac{13}{4}$	(3)	1A 1A 1A
4.5	$\left(1\frac{1}{5}\right)^2 = \left(\frac{6}{5}\right)^2 = \frac{36}{25}$	(2)	2A
5.1.1	True		
5.1.2	False		
5.1.3	False		
5.1.4	False	(4)	4A
5.2.1	7		
5.2.2	4		
5.2.3	-3	(3)	3A
6.1	$3abc = 3(-1)(2)(-3) = -18$	(2)	1 substitution 1A
6.2	$a^2 - 2b^3 + c^2 = (-1)^2 - 2(2)^3 + (-3)^2$ $= 1 - 16 + 9$ $= -6$	(4)	1 substitution 2A 1A
6.3	$a - b - c = (-1) - (2) - (-3)$ $= -1 - 2 + 3$ $= 0$	(3)	1 substitution 1A 1A
7.1	$x + x + x = 3x$	(1)	1A
7.2	$a + b - 2a + 5b = -a + 6b$	(2)	2A
7.3	$2a^2b \times 3ab^3 = 6a^3b^4$	(2)	2A
7.4	$-(-2x)^4 = -(16x^4) = -16x^4$	(2)	2A
7.5	$\frac{16x^4y^2}{8x^3y} = 2xy$	(2)	2A
7.6	$\left(\frac{-4x}{16x^2}\right)^3 = \left(\frac{-1}{4x}\right)^3 = \frac{-1}{64x^3}$	(3)	1 sub step 2A

7.7	$\frac{-2pq^2 \times 3p^3q^6}{12p^3q^3} = \frac{-6p^4q^8}{12p^3q^3} = \frac{-pq^5}{2}$	(3)	1 sub step 2A
7.8	$\sqrt{25a^6 - 16a^6} = \sqrt{9a^6} = 3a^3$	(3)	1 sub step 2A
7.9	$\sqrt{49x^9} = 7x^{4.5}$	(1)	1A
7.10	$\frac{18x^2y + 9xy^2 - 3xy}{3xy} = 6x + 3y - 1$	(3)	3A
8.1	$4(a + 2) = 4a + 8$	(2)	2A
8.2	$-x(2x - 3) = -2x^2 + 3x$	(2)	2A
8.3	$3x(x + 3) - 15x = 3x^2 + 9x - 15x$ $= 3x^2 - 6x$	(3)	1A 2A
8.4	$6 - 2(x + 3) - 3 = 6 - 2x - 6 - 3$ $= -2x - 3$	(3)	1A 2A
8.5	$a(a - 2m) - 3(a^2 + am) = a^2 - 2am - 3a^2 - 3am$ $= -2a^2 - 5am$	(4)	2A 2A
9.1.1	$7x = -21$ $x = -3$	(2)	2A
9.1.2	$3x + 5 = 17$ $3x = 17 - 5$ $3x = 12$ $x = 4$	(3)	1A 1A 1A
9.1.3	$6x + 3 = 3x + 12$ $6x - 3x = 12 - 3$ $3x = 9$ $x = 3$	(4)	2A 1A 1A
9.2	$L = B + C - A$ $= x + 1 + x - 2 - x$ $= x - 1$	(3)	2A expression 1A