SHARP

Worksheet 2 Memorandum: Integers Revision

Grade 9 Mathematics

1. a) $-81 \div -9$
$= 9$

b) $9 \times 11 - 6(-5)$
$= 99 + 30$
$= 129$

c) $95 + 12 \div 12 + 10$
$= 95 + 1 + 10$
$= 106$

d) $10 + 13 - 12 \div 4$
$= 23 - 3$
$= 20$

e) $10 + (-14) \times 4$
$= 10 - 56$
$= -46$

f) $12(-11) \div 3(-6)$
$= -132 \div -18$
$= 7\frac{1}{3}$

g) $2 - 5 \div (15)(-2)$
$= 2 - 5 \div (-30)$
$= 2 + \frac{1}{6}$
$= 2\frac{1}{6}$

h) $8 + 9 \times 10 \div (3 + 7)$
$= 8 + 90 \div 10$
$= 8 + 9$
$= 17$

i) $8 .(-11).(-3) \div 6$
$= 264 \div 6$
$= 44$

j) $11 + 9 - (-10)$
$= 11 + 9 + 10$
$= 30$

k) $-72 \div (-12) - 9$
$= 6 - 9$
$= -3$

l) $(6 \times 10) \div (0)$
$=$ undefined

m) $(-49) \div (-4 + (-3))$
$= (-49) \div (-7)$
$= 7$

n) $(5 + 5) \times -2 \div (-4)$
$= 10 \times -2 \div (-4)$
$= -20 \div -(4)$
$= 5$

o) $-8 - 12 - (-20)$
$= -20 + 20$
$= 0$

p) $20 \times (5 + (-4))$
$= 20 \times 1$
$= 20$

q) $3 \times (-3) \times (-9 \div 1)$
$= -9 \times (-9)$
$= 81$

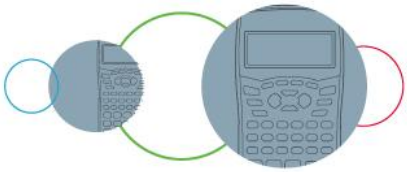
r) $(54 \div (-9)) \times -6$
$= -6 \times -6$
$= 36$

2. a) negative b) cube-root c) positive d) positive
e) negative f) positive g) one term

3. a) $\sqrt[3]{100 + 25}$
$= \sqrt[3]{125}$
$= 5$

b) $\sqrt{9} + \sqrt{64}$
$= 3 + 8$
$= 11$

c) $\sqrt[3]{-216}$
$= -6$



d) $10^2 + (-6)^3$
$= 100 - 216$
$= -116$

e) $\sqrt{9+16}$
$= \sqrt{25}$
$= 5$

f) $\sqrt{36} - 2^3$
$= 6 - 8$
$= -2$

g) $(1)^3 + \sqrt{81}$
$= 1 + 9$
$= 10$

h) $(-5)^2 + (4)^3$
$= 25 + 64$
$= 89$

i) $\sqrt[3]{216} - (-5)^3$
$= 6 + 125$
$= 131$

j) $(-6)^2 + (-2)^2$
$= 36 + 4$
$= 40$

k) $\sqrt[3]{-1} + \sqrt{49}$
$= -1 + 7$
$= 6$

l) $\sqrt{-64}$
impossible – cannot take the root of a negative.

m) $(1)^2 + (3+4)^2$
$= 1 + (7)^2$
$= 1 + 49$
$= 50$

n) $(12)^2 + (-4)^3$
$= 144 - 64$
$= 80$

o) $\sqrt{6^2 + 8^2}$
$= \sqrt{36 + 64}$
$= \sqrt{100}$
$= 10$

p) $(5)^2 + (4)^2$
$= 25 + 16$
$= 41$

q) $1^3 + (-2)^3$
$= 1 - 8$
$= -7$

r) $(3)^3 + (11)^2$
$= 27 + 121$
$= 148$

4. 1 and e; 2 and f; 3 and c; 4 and g; 5 and b; 6 and a; 7 and d

5. a) 16 → -16; b) 40 → -40; c) 25 → -25; d) -6 → 6; e) 62 → -62; f) -1 → 1; g) -64 → 64; h) -27 → 27

6. a) -5 → $-\frac{1}{5}$; b) $\frac{3}{2} \rightarrow \frac{2}{3}$; c) $\frac{1}{4} \rightarrow 4$; d) -3 → $-\frac{1}{3}$; e) $-\frac{5}{6} \rightarrow -\frac{6}{5}$; f) $7 \rightarrow \frac{1}{7}$; g) -49 → $-\frac{1}{49}$; h) $\frac{11}{9} \rightarrow \frac{9}{11}$

7. Solly's points = +3 + 5 -10 = -2

8. Biscuits = 36 – 11 – 12 – 24 = -11
Tara needs to bake another 11 biscuits.

9. Make Johan represent positive numbers and Thabo represent negative numbers:
= +13 + 4 – 17 + 5 – 10 = -5m
Therefore Thabo wins by 5m.