

# SHARP

## Worksheet 2 Memorandum: Integers

### Grade 8 Mathematics CAPS



Remember the button on your SHARP EL535 helps make your negative integers.

1. Integers are positive and negative whole numbers.

2. a)  $-23 \_\_>\_\_ -24$       b)  $-1 \_\_<\_\_ 0$       c)  $3 \_\_>\_\_ -3$   
d)  $-(-7) \_\_= \_\_ + (-7)$       e)  $-(-3) \_\_>\_\_ +(-3)$       f)  $-2.5 \_\_= \_\_ -2\frac{1}{2}$   
g)  $-10 \_\_= \_\_ - (+10)$       h)  $(-2)^2 \_\_>\_\_ -4$       i)  $-1 \_\_= \_\_ (-1)^3$   
j)  $(-3)(-4) \_\_>\_\_ (-2)(+6)$       k)  $(-3)^2 \_\_>\_\_ -(-3)^2$       l)  $-4 \_\_<\_\_ 1$

3. a) 10    7    4    1    -2    -5    -8    -11    -14    -17  
b) 16    12    8    4    0    -4    -8    -12    -16    -20  
c) 8    6    4    2    0    -2    -4    -6    -8    -10  
d) 14    7    0    -7    -14    -21    -28    -35    -42    -49  
e) 6    0    -6    -12    -18    -24    -30    -36    -42    -48  
f) 36    27    18    9    0    -9    -18    -27    -36    -45

4. a)  $(-) \times (+) = -$       b)  $(+) \times (+) = (+)$       c)  $(-) \times (-) = (+)$   
d)  $(-) \div (-) = +$       e)  $(-) \times (+) = (-)$       f)  $(+) \div (-) = -$   
g)  $(+) \div (+) = +$       h)  $(-) \div (+) = (-)$       i)  $(-)^3 = -$   
j)  $(+)^3 = +$       k)  $(-)^2 = +$       l)  $(+)^2 = +$

5. a)  $6 - (-3) + \sqrt{25}$   
 $= 6 + 3 + 5$   
 $= 14$

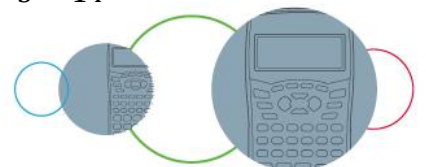
b)  $-25 + (-2)^3$   
 $= -25 - 8$   
 $= -33$

c)  $5 - (-5) - (2)^3$   
 $= 5 + 5 - 8$   
 $= 2$

d)  $-10 + \sqrt{16} - 3 - (-12)$   
 $= -10 + 4 - 3 + 12$   
 $= 3$

e)  $3 - 4^3 + (-6) + \sqrt{121}$   
 $= 3 - 64 - 6 + 11$   
 $= -56$

f)  $25 - \sqrt[3]{-8} - 8 + (-5)$   
 $= 25 - (-2) - 8 - 5$   
 $= 25 + 2 - 8 - 5 = 14$



$$\begin{aligned} \text{g)} \quad & 78 + 5(-3) + (-15)(2) \\ & = 78 - 15 - 30 \\ & = 33 \end{aligned}$$

$$\begin{aligned} \text{h)} \quad & -6(-2) + \frac{-12}{-2} \\ & = 12 + 6 \\ & = 18 \end{aligned}$$

$$\begin{aligned} \text{i)} \quad & \sqrt{25} + \sqrt[3]{-125} + (-1)(-2) \\ & = 5 - 5 + 2 \\ & = 2 \end{aligned}$$

$$\begin{aligned} \text{j)} \quad & \frac{-5(3)+6}{7+(-4)} \\ & = \frac{-15+6}{7-4} \\ & = \frac{-9}{3} \\ & = -3 \end{aligned}$$

$$\begin{aligned} \text{k)} \quad & \sqrt[3]{8} - (-4)(3) + (-4)^2 \\ & = 2 + 12 + 16 \\ & = 30 \end{aligned}$$

$$\begin{aligned} \text{l)} \quad & \sqrt[3]{-64} \times (-4) + \frac{16}{-2} \\ & = -4 \times (-4) - 8 \\ & = 16 - 8 \\ & = 8 \end{aligned}$$

$$\begin{aligned} \text{m)} \quad & -\frac{10}{2} + \frac{24}{-3} - (4)(-3) \\ & = -5 - 8 + 12 \\ & = -1 \end{aligned}$$

$$\begin{aligned} \text{n)} \quad & \sqrt{\frac{121}{144}} + \frac{10+(-9)}{-2(-6)} \\ & = \frac{11}{12} + \frac{10-9}{12} \\ & = \frac{11}{12} + \frac{1}{12} \\ & = 1 \end{aligned}$$

$$\begin{aligned} \text{o)} \quad & -4 + \frac{(-5)}{-1} - (-6)^2 \\ & = -4 + 5 - 36 \\ & = -35 \end{aligned}$$

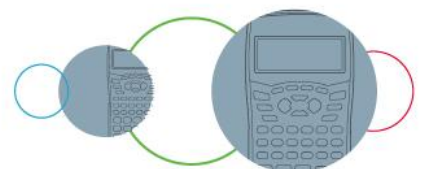
$$\begin{aligned} \text{p)} \quad & -1 + \frac{25}{-5} + (-4)(-1)(3) \\ & = -1 - 5 + 12 \\ & = 6 \end{aligned}$$

$$\begin{aligned} \text{q)} \quad & 8 + \sqrt[3]{125} - (-3)^3 \\ & = 8 + 5 - (-27) \\ & = 13 + 27 \\ & = 40 \end{aligned}$$

$$\begin{aligned} \text{r)} \quad & 14 - \frac{\sqrt{49}}{3-(-4)} + \sqrt[3]{27} \\ & = 14 - \frac{7}{3+4} + 3 \\ & = 14 - \frac{7}{7} + 3 \\ & = 14 - 1 + 3 \\ & = 16 \end{aligned}$$

$$\begin{aligned} \text{s)} \quad & -\frac{9}{-3} \times (-2)(3) + 1 \\ & = 3 \times (-6) + 1 \\ & = -18 + 1 \\ & = -17 \end{aligned}$$

$$\begin{aligned} \text{t)} \quad & -8 - (-4) + (2)^3 \\ & = -8 + 4 + 8 \\ & = 4 \end{aligned}$$



6. a) Cape Town → 9°                      b) New York → 11°  
 c) Vancouver → 7°                      d) Moscow → 4°  
 e) Beijing → 9°                          f) London → 6°  
 g) Seoul → 10°                          h) Male → 4°  
 i) Dhaka → 16°                          j) Toronto → 6°

7. a) Moscow                                  b) Male  
 c) Moscow                                  d) Male  
 e) Dhaka                                      f) Tie: Moscow and Male

8. a)  $R656 - R500 + R200 - R400$   
 $= -R44$                       Sue owes the bank R44.
- b) Sue should deposit R44 into her bank account.
- c)  $-R44 + R350$   
 $= R306$                       Sue now has R306 in her bank account.
- d)  $R306 - R50$   
 $= R256.$                       Sue can still spend R256.

