Worksheet Booklet
Katoomba High School
Stage 4 (8B)

Instructions

- Complete all the sheets in this booklet
- Write in the space provided
- Hand booklet in to Deputy Principal
## Radical Rhyme

Work out the answers for the additions and subtractions below.

<table>
<thead>
<tr>
<th></th>
<th>A. 364</th>
<th>B. 563</th>
<th>C. 726</th>
<th>D. 843</th>
<th>E. 698</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>+ 83</td>
<td>+ 197</td>
<td>+ 249</td>
<td>- 21</td>
<td>- 143</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>G. 814</th>
<th>H. 146</th>
<th>I. 273</th>
<th>K. 783</th>
<th>L. 862</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- 265</td>
<td>+ 384</td>
<td>+ 569</td>
<td>+ 197</td>
<td>- 50</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>M. 917</th>
<th>N. 269</th>
<th>O. 275</th>
<th>P. 387</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- 78</td>
<td>- 147</td>
<td>54</td>
<td>172</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>R. 28</th>
<th>S. 4608</th>
<th>T. 6729</th>
<th>U. 2314</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>134</td>
<td>- 4138</td>
<td>- 6558</td>
<td>- 1978</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>V. 54</th>
<th>W. 1893</th>
<th>Y. 25</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>179</td>
<td>- 1588</td>
<td>593</td>
</tr>
</tbody>
</table>

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>+ 179</td>
<td>+ 247</td>
<td>+ 29</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Match the letters that go with the answers you found above to the same numbers below, to decode the rhyme.

<table>
<thead>
<tr>
<th>305</th>
<th>530</th>
<th>555</th>
<th>122</th>
<th>305</th>
<th>489</th>
<th>341</th>
<th>980</th>
<th>842</th>
<th>122</th>
<th>549</th>
<th>305</th>
<th>842</th>
<th>171</th>
<th>530</th>
</tr>
</thead>
<tbody>
<tr>
<td>122</td>
<td>336</td>
<td>839</td>
<td>760</td>
<td>555</td>
<td>341</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>822</td>
<td>489</td>
<td>122</td>
<td>171</td>
<td>812</td>
<td>555</td>
<td>171</td>
<td>2120</td>
<td>489</td>
<td>336</td>
<td>341</td>
<td>839</td>
<td>842</td>
<td>122</td>
<td>822</td>
</tr>
<tr>
<td>470</td>
<td>812</td>
<td>336</td>
<td>839</td>
<td>760</td>
<td>555</td>
<td>341</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>608</td>
<td>812</td>
<td>447</td>
<td>975</td>
<td>555</td>
<td>488</td>
<td>447</td>
<td>812</td>
<td>336</td>
<td>555</td>
<td>2120</td>
<td>489</td>
<td>336</td>
<td>122</td>
<td>555</td>
</tr>
<tr>
<td>171</td>
<td>489</td>
<td>760</td>
<td>555</td>
<td>341</td>
<td>842</td>
<td>549</td>
<td>530</td>
<td>171</td>
<td>447</td>
<td>122</td>
<td>822</td>
<td>470</td>
<td>336</td>
<td>975</td>
</tr>
</tbody>
</table>
Home Study Unit 4

1 There are 10 list words hidden in this wordsearch.

Find the 10 words and then write, in alphabetical order, the missing 4 words.

A S E E W P D O F E W R I
B E K D O R P R B K L A T
P G J O T M O O S W A B D
K R V M O L L T D E Y O E
P R O M O T E T T E T U D B
M U D B W A R D R O B E O
E D O R E D E N O U P K L
O B D E N O T E L Q P D G

2 Unjumble: p s e d l o e ___________ e t p m o o r ___________

b w d o a e r r ___________ b e l o g ___________

3 Which list or champs' words contain . . .

a 3 vowels and 2 consonants? (3)

b 2 vowels and 3 consonants? (3)

c 3 vowels and 3 consonants? (1)

d 3 vowels and 4 consonants? (4)

4 Funny Pictures: Draw . . .

a globe under a wardrobe

a microbe toting a book of quotes

5 Use a dictionary to find the definitions of . . .

anecdote

microbe

corrode

Vocabulary Extension

1 a Another word for worldwide is g l o b __ .

b Something occurring in episodes is e p i s o d __ .

c When something bursts inwards it is said to __ _ p i o d e .

2 What does the expression ‘learning by rote’ mean?

General Knowledge Acronyms

An acronym is a word formed from the initial letters of other words.

LOTE is an acronym used by the Victorian educational authorities. It means Languages Other Than English.

Use a dictionary to help you to find out what the following acronyms mean . . .

R A D A R

L A S E R

A N Z A C

U N E S C O
Worksheet 5-03  Integer review

1 Find:
   a  3 + (-5)  b  -3 + 5  c  3 - 5
   d  -3 \times 5  e  -3 - 5  f  3 - (-5)
   g  -3 + (-5)  h  -3 \times (-5)  i  -3 - (-5)

2 Find the temperature when:
   a  8°C drops by 10°
   b  -5°C rises by 4°
   c  -9°C drops by 2°
   d  -1°C rises by 7°
   e  6°C drops by 9°
   f  -10°C rises by 3°

3 Find:
   a  18 + (-2) \times (-3)
   b  \frac{45}{9}
   c  -4 \times (-7) \times (-2)
   d  7 \times 10 - 4
   e  -4 \times (-4) + 3 + (-1)
   e  -2 + 2 - 8 + 8
   g  -3 + 9 + (-2) - 5
   h  \frac{3 \times (-10)}{-6}
   i  -5 \times [7 - (-3 + 4)]
   j  4 \times (-2) + 6
   k  28 - 8 \times 3
   l  -11 + 5 \times (-3) + 3

4 Complete these tables:

<table>
<thead>
<tr>
<th>a</th>
<th>+</th>
<th>-2</th>
<th>7</th>
<th>0</th>
<th>-3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>b</th>
<th>\times</th>
<th>3</th>
<th>-6</th>
<th>2</th>
<th>10</th>
<th>-7</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5 Find the difference when the temperature changes from:
   a  2°C to 14°C
   b  -3°C to 5°C
   c  6°C to -1°C
   d  -4°C to -8°C
   e  -5°C to 0°C
   f  -9°C to -1°C

6 Find:
   a  -3 \times 6 + (-4) \times 6
   b  -7 - (4 - 9) - 10
   c  5 \times (-2) + 4 \times (-1) + 12
   d  2 \times (-4) \times 8
   e  \frac{-24 + 4}{-8}
   f  (-4)^2 + (-3)^2
   g  (-3 - 3) \times 10
   h  14 - 18 + (-2)
   i  (3 \times (7 - 10) + 5) + 4
   j  12 - [-8 + (-1) + 2]
   k  18 + 3 - 4 \times 7
   l  -5 \times 8 - 27 + (-3)
Assignment 30: The Origin of Chemistry

Chemical processes were used to make copper and iron probably as early as 8000 BC (late Stone Age) and 3000 BC (Bronze Age). Glass was made as early as 2600 BC. But chemistry did not begin as a serious study till the middle ages when the alchemists were attempting, among other things, to find ways of turning common metal into gold. In the process they began to discover the laws of chemistry and a large range of new chemicals, including the mineral acids. By 1800 it was fast becoming a science, a body of ordered knowledge verifiable by experiment.

Elements
The ancient Greeks believed in the existence of only four elements that make up the whole universe — fire, air, earth and water. By the beginning of the nineteenth century, twenty-two elements had been correctly identified (thirteen metals and nine non-metals). Today ninety-two naturally occurring elements are known and another twelve or so have been produced artificially in atomic reactors. The lightest is hydrogen, the heaviest natural element is uranium. By definition, these elements make up all matter, but cannot themselves be simplified into components.

Atoms as logical
In the fifth century BC the Greek philosopher Democritus proposed that all matter was composed of tiny indivisible particles. He reasoned that if an object was cut into smaller and smaller pieces, eventually bits so small would be obtained that they would be indivisible. These particles he called atoms (from the Greek: atomos — indivisible).

Scientific proof
John Dalton resurrected the atomic theory in 1808, but whereas Democritus had based his idea on reason alone, Dalton based his on experiments. The path to modern scientific atomic theory was paved by the French chemist Antoine Lavoisier (1743–94). Using accurate scales he discovered the Law of Definite Proportions — that when two pure substances combine to
form a given compound, they do so in definite proportions by weight.

**John Dalton**

**Dalton’s atomic theory**
John Dalton (1766–1844) saw in this the first proof of atoms. He could only make sense of the law if each element was made up of separate particles all having the same weight. In 1808 he proposed his Atomic Theory — that each element consisted of one kind of atom only, different from the atoms of all other elements, and that atoms of different elements combined to form compounds.

For example:

\[ \text{Iron} + \text{Sulphur} \rightarrow \text{Iron sulphide} \]

**Atomic weights**
Dalton even worked out the first relative atomic weights based on 1 for hydrogen, the lightest element, using the ratio of combining weights in a chemical reaction. For instance, seeing that 8 grams of oxygen combined with 1 gram of hydrogen, he figured the atomic weight of oxygen to be 8. However, his results were wrong since he believed all atoms combined in a simple 1:1 ratio. Today we know that the formula for water is H₂O, a 2:1 ratio, and we know the atomic weight of oxygen to be 16.

<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>DALTON’S VALUES</th>
<th>TODAY’S VALUES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen</td>
<td>1</td>
<td>1.008</td>
</tr>
<tr>
<td>Carbon</td>
<td>5.4</td>
<td>12</td>
</tr>
<tr>
<td>Oxygen</td>
<td>7</td>
<td>16</td>
</tr>
<tr>
<td>Sulphur</td>
<td>13</td>
<td>32.1</td>
</tr>
<tr>
<td>Sodium</td>
<td>28</td>
<td>23</td>
</tr>
<tr>
<td>Iron</td>
<td>50</td>
<td>55.8</td>
</tr>
<tr>
<td>Copper</td>
<td>56</td>
<td>63.5</td>
</tr>
</tbody>
</table>

*Table 30.1 Dalton’s atomic weights compared with modern values*

**Questions**
Answer in sentence form.
1. Who were the alchemists?
2. State the Law of Definite Proportions.
3. How was the word atom derived?
4. What is meant by the atomic weight of an element?
5. How is Greek philosophy different from modern science in its approach to problems?
Exercise 14B
1. A water tank holds 2 kL of water. How many litres is this?
2. A litre bottle of lemonade costs 98c. How much does John pay for 3 bottles?
3. Write down the number of millilitres in a litre.
4. How many litres are there in a kilolitre?
5. How many millilitres are there in 4 litres?
6. How many millilitres in 5 litres?
7. How many millilitres in 6 litres?
8. How many millilitres in 10 litres?
9. Express 7000 mL in litres.
10. Express 8000 mL in litres.

Time

<table>
<thead>
<tr>
<th>60 seconds</th>
<th>= 1 minute</th>
</tr>
</thead>
<tbody>
<tr>
<td>60 minutes</td>
<td>= 1 hour</td>
</tr>
<tr>
<td>24 hours</td>
<td>= 1 day</td>
</tr>
</tbody>
</table>

Exercise 14C
1. Write down the number of seconds in 1 minute.
2. How many seconds are there in
   (a) 3 minutes?
   (b) 5 minutes?
   (c) 25 minutes?
3. Copy and complete:
   (a) 2 days = ... hours
   (b) 1½ hours = ... minutes
   (c) 120 minutes = ... hours
   (d) 3 weeks = ... days
   (a) 28 days = ... weeks
   (f) 1 fortnight = ... days
   (g) 48 months = ... years
   (h) 104 weeks = ... years
   (i) 1 century = ... years
   (j) 1 leap year = ... days
4. How many minutes are there in:
   (a) 2 hours?
   (b) 3½ hours?
   (c) 1 hour 17 minutes?
   (d) three-quarters of an hour?
5. Write down the times shown here.

6. How many minutes are there from
   (a) 12 noon to 12.30 p.m.?
   (b) 8.15 a.m. to 8.40 a.m.?
   (c) 6.45 p.m. to 7.12 p.m.?
7. What times are shown here? Write your answer in words in two different ways.

Example

<table>
<thead>
<tr>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) twelve fifteen</td>
</tr>
<tr>
<td>(ii) a quarter past twelve</td>
</tr>
</tbody>
</table>

8. (a) How long is it from 6.30 p.m. to midnight?
(b) How long is it from 9 a.m. to 1.30 p.m.?
(c) A train is due to arrive at 10.15 a.m. but is 3 minutes late. What time does it arrive?
(d) A train is due to arrive at 2.45 p.m. but is 5 minutes early. What time does it arrive?
(e) Draw a clock face showing the time at 6.20.
(f) Draw a clock face showing the time at 11.45.
9. Many modern watches show *digital* time. Some of you will have *digital* watches. What time is shown in each of the following?

<table>
<thead>
<tr>
<th>Example</th>
<th>We say:</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:45</td>
<td>nine forty-five</td>
</tr>
<tr>
<td></td>
<td>or</td>
</tr>
<tr>
<td></td>
<td>a quarter to ten</td>
</tr>
</tbody>
</table>

(a) 9:30   (b) 2:55   (c) 12:04

The 24-hour clock is being used more and more, and helps to avoid confusion.

<table>
<thead>
<tr>
<th>Examples</th>
<th>Airline timetables</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Time on a video recorder</td>
</tr>
<tr>
<td></td>
<td>Can you think of more?</td>
</tr>
</tbody>
</table>

10. Copy and complete the table. Discuss with your teacher how to say these times.

(a)

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1 a.m.</td>
<td>0100</td>
<td>1 p.m.</td>
<td>1300</td>
<td></td>
</tr>
<tr>
<td>2 a.m.</td>
<td>0200</td>
<td>2 p.m.</td>
<td>1400</td>
<td></td>
</tr>
<tr>
<td>3 a.m.</td>
<td>0300</td>
<td>3 p.m.</td>
<td>1500</td>
<td></td>
</tr>
<tr>
<td>4 a.m.</td>
<td>0</td>
<td>4 p.m.</td>
<td>1600</td>
<td></td>
</tr>
<tr>
<td>5 a.m.</td>
<td>0</td>
<td>5 p.m.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 a.m.</td>
<td>0</td>
<td>6 p.m.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 a.m.</td>
<td></td>
<td>7 p.m.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 a.m.</td>
<td></td>
<td>8 p.m.</td>
<td>2000</td>
<td></td>
</tr>
<tr>
<td>9 a.m.</td>
<td></td>
<td>9 p.m.</td>
<td>2100</td>
<td></td>
</tr>
<tr>
<td>10 a.m.</td>
<td>1000</td>
<td>10 p.m.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11 a.m.</td>
<td></td>
<td>11 p.m.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 noon</td>
<td>1200</td>
<td>12 midnight</td>
<td>2400</td>
<td></td>
</tr>
</tbody>
</table>
1 How many five-letter science-related words can you write under each heading in fifteen minutes? Some words may fit under more than one heading.

<table>
<thead>
<tr>
<th>CHEMISTRY</th>
<th>PHYSICS</th>
<th>BIOLOGY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2 Now repeat the exercise with four-letter science words!

<table>
<thead>
<tr>
<th>CHEMISTRY</th>
<th>PHYSICS</th>
<th>BIOLOGY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The List

cube  jube  tube  attitude  produce  reduce  deduce  truce
include  conclude  attitude  produce  intrude  elude  solitude
refuge  mule  molecule  fruke  juke-box
rule  fume  assume  ridicule  perfume  resume

1 Which list word ... ?
   a a noble man ________________________________  b to begin again ________________________________
   c height above sea level ________________________________  d chewy fruit-flavoured lolly ________________________________
   e a shelter ________________________________  f another name for a donkey ________________________________
   g end ________________________________  h work out by reasoning ________________________________

2 Write in one interesting sentence: produce costume perfume ________________________________

3 How many faces has a cube? ________________________________

4 Write a list word in the gaps in these sentences ... 
   a The weary travellers sought ________________________________ from the ferocious storm in an abandoned hayshed.
   b The children’s ________________________________, to moving improved after they realised that their new house had a swimming pool.
   c Many spectators lined the roadway as the ________________________________ and duchess passed by.
   d Life in a lighthouse can be one of ________________________________.
   e The whale disappeared after a final huge splash of the water with its broad ________________________________
   f We danced happily to the music of the ________________________________ until late that evening.

Word Building

1 Add the suffix -tion to the following list words (be careful) ... 
   produce ________________________________ reduce ________________________________ deduce ________________________________
   assume (careful!) ________________________________ resume (careful!) ________________________________

Write 2 of your new words in one interesting sentence.

2 Add the suffix -sion to the following words (be careful!) ... 
   include ________________________________ conclude ________________________________ intrude ________________________________
   exclude ________________________________ elude ________________________________

Write one sentence containing any two of these new words.

For Champs exclude gratitude deluge delude multitude interlude
Copy on to grid paper and complete from this list of words:

CENTURY
DECADE
HEIGHT
HOUR
LIQUID
LITRE
METRIC

MINUTE
PARENTHESES
OPERATION
QUANTITY
SECOND
SYMBOL
Leadership in Physical Activity and Sport - continued

Activity
The following questions attempt to analyse your leadership style. Read each item carefully, think about how you usually behave when you are the leader in a group situation. Using the key, circle the letter that most closely describes your style. Circle only one choice per question.

A = Always   O = Often   S = Sometimes   R = Rarely   N = Never

1. I take time to explain how a job should be carried out.  A O S R N
2. I explain the part that others’ are to play in the group.  A O S R N
3. I make clear the rules and procedures for others to follow in detail.  A O S R N
4. I organise myself.  A O S R N
5. I let people know how well they are doing.  A O S R N
6. I let people know what is expected of them.  A O S R N
7. I encourage the use of uniform procedures for others to follow in detail.  A O S R N
8. I make my attitude clear to others.  A O S R N
9. I assign others to particular tasks.  A O S R N
10. I make sure that others understand their part in the group.  A O S R N
11. I schedule what I want the others to do.  A O S R N
12. I ask that others follow standard rules and regulations.  A O S R N
13. I make working on a job more pleasant.  A O S R N
14. I go out of my way to be helpful to others.  A O S R N
15. I respect others’ feelings and opinions.  A O S R N
16. I am thoughtful and considerate of others.  A O S R N
17. I maintain a friendly atmosphere in the group.  A O S R N
18. I do little things to make it more pleasant for others to be a member of my group.  A O S R N
19. I treat others as equals.  A O S R N
20. I give others advance notice of change and explain how it will affect them.  A O S R N
21. I look out for others’ personal welfare.  A O S R N
22. I am approachable and friendly toward others.  A O S R N

Scoring
For Questions 1-12 score:
- 5 points – Always
- 4 points – Often
- 3 points – Sometimes
- 2 points – Rarely
- 1 point – Never

A total greater than 47 indicates you like to initiate structure, You plan, organise, direct, and control the work of others.

For questions 13-22 score:
- 5 points – Always
- 4 points – Often
- 3 points – Sometimes
- 2 points – Rarely
- 1 point – Never

A total greater than 40 indicates that you are a considerate leader. A considerate leader is one who is concerned with the comfort, well being, and contributions of others.
Exercise 8E

Use the prices listed in the Supermarket Specials above to answer the following.

Example
Mrs Bell bought the following items at the supermarket:
1 packet tea, 1 bottle tomato sauce, 1 kg sausages,
½ kg cheese.
Make out her bill and the total cost.

<table>
<thead>
<tr>
<th>Item</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 packet tea</td>
<td>$1.55</td>
</tr>
<tr>
<td>1 bottle tomato sauce</td>
<td>$1.35</td>
</tr>
<tr>
<td>1 kg sausages</td>
<td>$2.29</td>
</tr>
<tr>
<td>½ kg cheese</td>
<td>$2.49</td>
</tr>
<tr>
<td><strong>Total cost</strong></td>
<td><strong>$7.68</strong></td>
</tr>
</tbody>
</table>

Make out these bills.

1. 1 kg bacon, 2 packets tea, 1 size 16 chicken, 6 apples.
2. 1 kg cheese, 2 packets sugar, 2 kg carrots, 1 kg rissoles.
3. 2 bottles cream, 10 apples, 1 kg bacon, 1 bottle tomato sauce, 1 packet sugar.
4. 4 kidneys, 1 kg chicken pieces, 1 kg cheese, 1 bottle cream, 2 packets tea.
5. 2 packets sugar, 2 packets tea, 4 kg carrots, ½ kg cheese, 3 bottles cream.
6. 2 kg hamburger mince, 3 kidneys, 1 kg bacon, 2 kg carrots.
7. 7 apples, 3 kg carrots, 1 size 16 chicken, 2 bottles tomato sauce.
8. 2 kg sausages, 6 kidneys, 2 kg chicken pieces, 1 kg hamburger mince.
9. Jim and Sue are holding a barbecue and inviting their friends. They buy the following food at the supermarket: 5 kg sausages, 5 kg hamburger mince, 3 bottles tomato sauce, 20 apples. How much will it cost them?
10. The local restaurant orders 10 chickens from the supermarket. How much will they cost?

Discount

Sometimes goods are sold more cheaply than the marked price. The money that is subtracted is called a discount.

Example
The marked price of a bicycle is $184.00 but it is to be sold with a discount of $4.50. What is the selling price?

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marked price</td>
<td>$184.00</td>
</tr>
<tr>
<td>Discount</td>
<td>$4.50</td>
</tr>
<tr>
<td><strong>Selling price</strong></td>
<td><strong>$179.50</strong></td>
</tr>
</tbody>
</table>
Exercise 8F

Work out the selling price for each of these articles.

<table>
<thead>
<tr>
<th>Article</th>
<th>Marked price</th>
<th>Discount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Bicycle</td>
<td>$279</td>
<td>$35</td>
</tr>
<tr>
<td>2. Record</td>
<td>$13.50</td>
<td>$2.75</td>
</tr>
<tr>
<td>3. Shirt</td>
<td>$49.00</td>
<td>$4.90</td>
</tr>
<tr>
<td>4. Shoes</td>
<td>$54.99</td>
<td>$5.49</td>
</tr>
<tr>
<td>5. Fishing rod</td>
<td>$77.80</td>
<td>$7.78</td>
</tr>
<tr>
<td>6. Record player</td>
<td>$299.95</td>
<td>$4.25</td>
</tr>
<tr>
<td>7. Football</td>
<td>$37.30</td>
<td>$5</td>
</tr>
<tr>
<td>8. Tennis racquet</td>
<td>$64.34</td>
<td>$3.20</td>
</tr>
<tr>
<td>10. Cassette</td>
<td>$8.99</td>
<td>$1.50</td>
</tr>
</tbody>
</table>

**SUGGESTED PRACTICAL WORK**

Work out the cost of your school uniform.

**WORDS**

Copy and complete each sentence using the list given.

(a) David had enough _______ to buy the _______.
(b) Jenny could not afford the _______ listed in the catalogue.
(c) When money is written in figures, there is a _______ between the _______ and cents.
(d) A skateboard marked at $54 was sold for $50. The _______ was $4.
(e) The advertisement read ‘Supermarket _______, Saturday only’.

**WEEKLY TEST 8**

1. Write in dollars:
   (a) 200c          (b) 120c          (c) 345c          (d) 1346c
2. Write in cents:
   (a) $1            (b) $10           (c) $2.20         (d) $9.45
3. Find the sum of $2.56 and $3.65.
4. What is the difference between $15.60 and $3.75?
5. Use the ‘Supermarket Specials’ on page 60 to make out and total these bills:
   (a) 1 kg bacon, 1 bottle of tomato sauce, 2 kidneys, a size 16 chicken and a packet of tea.
   (b) 1 bottle of cream, 1 packet of sugar, 2 size 16 chickens and 2 kg sausages.
6. Copy and complete this table.

<table>
<thead>
<tr>
<th>Article</th>
<th>Marked price</th>
<th>Discount</th>
<th>Selling price</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Bicycle</td>
<td>$320</td>
<td>$32</td>
<td></td>
</tr>
<tr>
<td>(b) Jeans</td>
<td>$65</td>
<td>$8</td>
<td></td>
</tr>
<tr>
<td>(c) Video</td>
<td>$899</td>
<td>$50.50</td>
<td></td>
</tr>
</tbody>
</table>

Looking back

7. One week the crowd at a Panther’s home game was 13 780. At the next home game the crowd was 16 445. What was the increase?
8. Lorraine bought a cassette for $8.99 and a record for $12.99. What was the total cost?
9. What is the missing number?
   \[ 57 + 118 + \underline{\phantom{0}} = 500 \]
10. (a) Arrange these numbers in order, from smallest to largest:
    243, 432, 342, 423, 234, 324
    (b) What is the difference between the smallest and the largest?
Home Study Unit 5

1 Use the code A = C B = D C = E etc. to identify these list words . . .
   C V V K V W F G ___________________________ G N W F G ————
   C U U W O G ___________________________ F W M G ————
   T G H W I G ___________________________ L W D G ————

Can you say which endings these letter combinations are . . .
   _ W F G ———— _ W E G ———— _ W O G ———— _ W M G ————
   _ W N G ———— _ W I G ———— _ W D G ————

2 Find all of the list words ending with -ule and -ume in this wordsearch . . .
   U A S S U M E U P U M E U
   R P E R F U M E E M L U M E
   E U E M E L U R E S U M E
   U M L U U E C O S T U M E
   M O L E C U L E U F M E E

3 Funny Pictures: Draw . . . a huge duke, wearing a costume with a plume, taking refuge from a deluge.

4 Write the missing letters . . .
   _ o l e _ _ _ _ e r f _ _ _ s _ _ _ _ _ _ _

Vocabulary Extension
Use a dictionary to help you write the definitions of the champs’ words.
exclude ___________________________
gratitude ___________________________
deluge ___________________________
delude ___________________________
multitude ___________________________
interlude ___________________________

General Knowledge
1 Find the capital cities nearest to these Longitudes and Latitudes . . .

<table>
<thead>
<tr>
<th>Latitude</th>
<th>Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>38 degrees S</td>
<td>145 degrees E</td>
</tr>
<tr>
<td>35 degrees N</td>
<td>140 degrees E</td>
</tr>
<tr>
<td>41 degrees N</td>
<td>74 degrees W</td>
</tr>
<tr>
<td>42 degrees N</td>
<td>12 degrees E</td>
</tr>
<tr>
<td>51 degrees N</td>
<td>0 degrees</td>
</tr>
</tbody>
</table>

2 What am I? I am one of Australia’s major highways. ___ ___ e

3 What am I? I am the second longest river in Europe. I rise in the Black Forest in Germany and then I flow to the Black Sea. ___________________________
Chemistry Opposites and Lab Tools

Chemistry opposites
1. Using a chemistry context, write the opposite word for each term below.

- fission _______________ explode _______________
- anion _______________ dissolve _______________
- proton (+) _______________ ignite _______________
- active _______________ base _______________
- saturated _______________ pure _______________
- rare _______________ weak _______________
- melt _______________ metal _______________
- polar _______________ oxidise _______________

2. Label the laboratory tools below using the words provided.

<table>
<thead>
<tr>
<th>BEAKER</th>
<th>BUNSEN BURNER</th>
<th>ROUND-BOTTOM FLASK</th>
<th>WATCH GLASS</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRIPOD AND GAUZE PAD</td>
<td>TEST TUBE</td>
<td>CLAMP</td>
<td>FUNNEL</td>
</tr>
</tbody>
</table>

© Wendy St Germain and Emerald City Books 2000. This sheet may be photocopied for non-commercial classroom use.
Worksheet 1-14  Numbers crossword

Clues across
2 A number from 0 to 9
4 The product of a negative and a positive is this
7 To approximate to a number of decimal places
8 The 4 in 10^4
10 The product of two negatives is this
12 To find a sum, you________
13 To multiply by 2
15 To make simpler
19 From largest to smallest
22 Positive or negative whole number
24 Fraction where numerator < denominator
26 3! is a ______ numeral
27 To ‘times’
29 \(\sqrt{}\) means square ______
32 To divide by 2
33 The top number in a fraction
34 To find the value
35 When the power is 3

Clues down
1 +
3 'To ‘minus’ ______ symbols
5 ( ) are called _______ symbols
6 The answer to a multiplication
9 Doing × before + is an example of _______ of operations
11 The _______ of 18 and 12 is 30
14 Addition is one of the 4 basic o_______
16 A number that divides into a given number
17 To multiply by itself
18 Special fractions with denominators that are powers of 10
20 The answer to a subtraction
21 A number that has only two factors
23 7 is an example of a Hindu-Arabic ______
25 1.708 has three decimal ______
28 Dividing by a two-digit number requires _______ division
30 To find a number’s prime factors, use a factor ______
31 To make an educated guess
Smoking losing its cool with the young

Secondary school students are giving cigarettes the thumbs-down, with smoking rates for 12 to 15-year-olds hitting their lowest level in almost 20 years.

A report reveals that every week in Victoria in 2002, about 62,000 people aged between 12 and 17 smoked, down from almost 74,000 in 1999.

The Cancer Council Victoria study also shows that these students are smoking fewer cigarettes, down from 2 million a week in 1999 to 1.5 million last year.

Council director David Hill said that while this was encouraging, it was important to continue working to reduce smoking among young people.

"If there are 62,000 kids in secondary schools in Victoria smoking and they continue to smoke throughout life, we would expect about half of them to die prematurely of tobacco-related illness, so we can't let that happen," Professor Hill said.

The youth smoking trends report is based on surveys conducted in 2002 with more than 4,000 students aged between 12 and 17 at 62 schools statewide. The surveys started in 1984 and are carried out every three years.

The 2002 report found that among students aged 12 to 15, the number of smokers — those who had smoked in the past week — had dropped to the lowest level since the survey started. Twelve per cent of boys and 13 per cent of girls smoked. The number of students in this age group who had tried smoking also fell, from 53 per cent in 1999 to 43 per cent in 2002.

Among those aged 16 and 17, more than two-thirds had tried smoking, but the survey found that the number defined as smokers was down.

In 2002, 26 per cent of boys said they had smoked in the past week, compared to a high of 32 per cent in 1993, and 30 per cent of girls were classified as smokers, down from a high of 37 per cent in 1996.

Other findings include:

- Young people with smoking parents are more likely to smoke than those without.
- Students who live in homes where smoking is allowed inside were 80 per cent more likely to have tried smoking.
- The proportion of 12 to 15-year-olds buying their own cigarettes fell from 25 per cent in 1999 to 15 per cent in 2002.
- Young males smoke on average 28 cigarettes a week, compared to 26 for young females.

Quit executive director Todd Harper said the downwards trend showed that anti-smoking initiatives and the banning of smoking in public places were working. "(But) unless we ban smoking in pubs and clubs, when these teenagers move into that environment in the next few years, they're just as likely to take up smoking," he said.

Source: C. C. Leung & C. Camilleri, 'Smoking losing its cool with the young', The Age, 9 December 2003, p. 5.

Questions

1. Which organisation conducted the survey into smoking among secondary school students?
2. Were there more or fewer smokers in 2002 than in 1999?
3. What does Professor Hill predict will be the result of smoking for half the teenage smokers?
4. Why do you think the percentage of young people who smoke is falling?
5. Which environments are blamed for young people taking up smoking?
6. In October 2004, the New South Wales and Victorian governments announced that smoking would be banned indoors in pubs and clubs from 1 July 2007. Find out more about the new regulations and the stages of implementation. What effects do you think these new laws will have on young people's rates of smoking?
Converting improper fractions to mixed numbers

**Fishing for fractions**

Fred the fisherman has gone down to the pier to catch some fish, but he needs your help to catch them. Fred needs to use the correct improper fraction to catch each fish. You can help him by drawing a fishing line from each improper fraction to the fish with its matching proper fraction.

<table>
<thead>
<tr>
<th>Improper Fraction</th>
<th>Mixed Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>9/4</td>
<td>1 1/2</td>
</tr>
<tr>
<td>8/3</td>
<td>2 2/3</td>
</tr>
<tr>
<td>15/9</td>
<td>1 8/9</td>
</tr>
<tr>
<td>3/2</td>
<td>1 1/2</td>
</tr>
<tr>
<td>7/2</td>
<td>3 1/2</td>
</tr>
<tr>
<td>10/3</td>
<td>3 1/3</td>
</tr>
<tr>
<td>14/10</td>
<td>1 2/5</td>
</tr>
<tr>
<td>17/9</td>
<td>1 8/9</td>
</tr>
<tr>
<td>27/10</td>
<td>2 2/5</td>
</tr>
<tr>
<td>6/5</td>
<td>1 1/2</td>
</tr>
<tr>
<td>13/2</td>
<td>6 1/2</td>
</tr>
<tr>
<td>17/7</td>
<td>2 3/7</td>
</tr>
</tbody>
</table>

Each fish has a mixed number associated with it.