Screening Test

Numeracy

Stage 4

General Instructions

- Answer all questions
- Show all necessary working out
- No calculators are to be used
- Time allowed: 30 minutes
### Aspect 4 - Place value

#### 1] a) Complete this number pattern:

20, 30, 40, .........., .........., .........

**Marks:** 1

#### 1] b) Explain how you would find the answer to 10 + 21.

**Marks:** 1

#### 2] a) Explain how you would add 49 and 26 mentally.

**Marks:** 1

#### 2] b) Use two numbers that are larger than 10 to complete this number sentence:

87 = ........ + ........

**Marks:** 1

#### 3] a) For the number 2985,

i] how many **tens** are there? ...........................................

**Marks:** 1

ii] how many **hundreds** are there? .................................

**Marks:** 1

iii] what is the value of the digit 2? .................................

**Marks:** 1

#### 3] b) Write **true** or **false**: 64 is larger than 93:

**Marks:** 1

*This question is continued on the next page ...*
### 3]  c] Explain how you find the answer to the following:

  i] \[1 + 2 + 3 + 7 + 8 + 9 + 5\]

  \[\text{.................................................................}\]

  \[\text{.................................................................}\]

  \[\text{.................................................................}\]

  ii] \[140 - 49\]

  \[\text{.................................................................}\]

  \[\text{.................................................................}\]

  \[\text{.................................................................}\]

### 4]  a] Use these cards to make up the largest possible four-digit number:

![Cards: 4, 9, 6, 1]

\[\text{.................................................................}\]

  b] Round 62156 to the nearest hundred.

  \[\text{.................................................................}\]

  c] Which number is larger: 0.65 or 0.08?

  \[\text{.................................................................}\]

  d] Write the following numbers in order from smallest to largest:

  \[0.1, \ 0.75, \ 0.02, \ 0.001, \ 0.8, \ 0.132\]

  \[\text{.................................................................}\]

  e] Write as a decimal: \[76 + \frac{3}{10} + \frac{5}{100}\]

  \[\text{.................................................................}\]

  f] Write the answer to \[5.34 \div 1000\].

  \[\text{.................................................................}\]
Aspect 5 - Multiplication and division

1] a] How many dots are in this diagram?
.................................................................................................................................................................................................

   b] Explain how you got your answer.
........................................................................................................................................................................................................
........................................................................................................................................................................................................
........................................................................................................................................................................................................

2] This diagram shows a rectangular pattern of dots. Each row has the same number of dots, but some of the dots are covered by a sheet of paper.

   a] How many dots are covered?
.................................................................................................................................................................................................

   b] How many dots are there altogether?
........................................................................................................................................................................................................

   c] Explain how you got your answer?
........................................................................................................................................................................................................
........................................................................................................................................................................................................
........................................................................................................................................................................................................

3] Explain how you find the answer to 19 x 9
........................................................................................................................................................................................................
........................................................................................................................................................................................................
........................................................................................................................................................................................................

4] Altogether, there are 12 dots in equal rows in this diagram. Some are hidden. How many rows are there?
........................................................................................................................................................................................................

   Paper

   Marks
   1  1  1  1  1  1  1
5] Complete the following statements:

a] $5 \times 2 = \ldots \times 5$

b] $8 \times 5 = 40$ is the same as $8 = \ldots \div \ldots$

c] $120 \div 10 = \ldots$ is the same as $\ldots \times 10 = \ldots$

Aspect 6 – Fraction units

1] a) Find $\frac{1}{2}$ of 12?

b) Show how you find $\frac{1}{4}$ of 20?

2] a) Which of these shapes would you use to correctly show $\frac{1}{5}$?

The shape I would use is $\ldots$.

b) Why did you choose this shape?

The shape I would use is $\ldots$.
3] A rectangle has been divided into three equal parts. These parts are placed on the grid. Which ones are they?

![Grid with parts A, B, C, D, E, F]

The parts are: ..........., ........... and ...........

4] a] Calculate $\frac{1}{5}$ of $\frac{1}{2}$

\[
\frac{1}{5} \times \frac{1}{2} = \frac{1}{10}
\]

b] Complete these number statements:

i] $\frac{1}{3} = \frac{\Delta}{12}$

$\Delta =$

ii] $\frac{2}{5} = \frac{8}{v}$

$v =$

5] Circle the smaller number: $\frac{1}{8}$ or $\frac{1}{10}$
Aspect 7 – Unit structure of length, area and volume

1] Here are three pencils with their top ends lined together:

   A
   B
   C

   a] Which of the three pencils (A, B or C) is the longest?
   
   b] Which of the three pencils (A, B or C) is the shortest?

2] The clips next to these pencils are all the same size.

   Pencil A
   Pencil B

   Explain which pencil is longer - Pencil A or Pencil B.

   Marks
   1
   1
   1
3] Mary measures the length of her study desk first by using the same type of highlighter and then by using same-sized paper clips as shown below:

*Highlighters* →

*Paper clips* →

Use the word *more* or the word *less* to make a true statement:

*To measure the length of her desk, Mary will need .......... highlighters than clips.*

4] Which of the shapes on this grid has the largest area?

A [Diagram of shapes A, B, and C] B

---

5] A brick which has the form of a rectangular prism is placed in a cylinder containing water and sinks to the bottom.

i] Calculate the volume of the block.

---

ii] The water level is at 65 mL before the brick is placed in the container. What is the water level after the brick reaches the bottom of the container?

---