NATIONAL SENIOR CERTIFICATE EXAMINATION
SUPPLEMENTARY EXAMINATION – MARCH 2019

MATHEMATICAL LITERACY: PAPER I

MARKING GUIDELINES

Time: 3 hours | 150 marks

These marking guidelines are prepared for use by examiners and sub-examiners, all of whom are required to attend a standardisation meeting to ensure that the guidelines are consistently interpreted and applied in the marking of candidates' scripts.

The IEB will not enter into any discussions or correspondence about any marking guidelines. It is acknowledged that there may be different views about some matters of emphasis or detail in the guidelines. It is also recognised that, without the benefit of attendance at a standardisation meeting, there may be different interpretations of the application of the marking guidelines.

Key: accuracy
method
continuous accuracy
rounding

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QUESTION 1

1.1 200 + 100 + 50 + 20 + 10 = R380

∴ R380 + R8,80 = R388,80

1.2 1.2.1 (a) $1 364,20 – $8,80

= $1 355,40

(b) R1 : $0,086 prize/oz gold

? : $1 364,20

∴ $1 364,2 ÷ $0,086

= R15 862,79

(c) R15 862,79 ÷ 1,14

= R13 914,73

1.2.2 100% – 91,67%

= 8,33%

1.2.3 $\frac{1}{2}$

OR

50%

1.2.4 2019 – 1967

= 52 years

1.3 1.3.1 6 years → 72 months +1 month = 73 months

1.3.2 $\frac{5,62 + 5,76 + 6,09 + 4,58 + 6,34 + 5,43 + 5,33}{7}$

$= \frac{39,15}{7}$

= 5,59%

1.3.3 R15 800 × 0,0533 = R842,14

1.3.4 A = R15 800 + R842,14

= R16 642,14

1.4 1.4.1 Billion

1.4.2 482,1 bn + 312,8 bn + 218,7 bn +96,1 bn +70,9 bn +84,9 bn

= R1 265,5 billion

1.4.3 482,1 – 218,7

= R263,4 bn

1.4.4 0,14 of certain number = R312,8 bn

∴R312,8 ÷ 0,14

= R2 234,29 bn

QUESTION 2

2.1 2.1.1 5 bunches

2.1.2 750 ml ÷ 5 = 150 ml

2.1.3 25 cases = 1 barrel

∴ 1 barrel = 25 × 12 × 750

225 000 ml ÷ 1 000

= 225 ℓ

2.1.4 1 acre = 400 vines

∴ 400 ÷ 30 = 13,3

= 13 barrels

2.2 2.2.1 1 m : 3,28 feet

? : 50

∴ 50 ÷ 3,28 = 15,24 m

2.2.2 15,24 ÷ 1,2 = 12,7 vines

= 12 vines

2.2.3 2,5 cm

2.2.4 30" + 20" + 20" = 70"

∴ 70 × 2,5

= 175 cm

2.3 2.3.1 3,6576 × 4,8768

A = 17,84 m^2

= 18 m^2

2.3.2 A to B: 18,5 cm

487,68 ÷ 18,5
1 : 26

2.3.3 r = 1,4 cm / 1,5 cm OR d = 2,9 cm / 3 cm

1 : 26

1,5 : 39 cm

∴ r = 39 cm in real life (OR 36,4 cm) d = 75,4cm / 78 cm

∴ c = 2 × 3,142 × 39

= 235,5 cm **OR** 2,355 m / 228,71 cm / 236,88 cm / 245,08 cm

2.3.4 (a) 20 °F

(b) $°C = \frac{5}{9}(65\ °F - 32)$

= 18,33°

QUESTION 3

3.1 3 253 679 ÷ 1 285 216

= 2,53 people/km^2

3.2 3.2.1 Colombia

OR

Ecuador

3.2.2 2,1 cm = 1 000 km (allow 2 cm)

9 cm = ?

9 ÷ 2,1 × 1 000 OR 9 ÷ 2 × 1 000

= 4 285,71 km = 4 500 km

3.2.3 625 miles = 1 000 km

∴ 0,625 miles/km

3.3 3.3.1 15:00 (3 p.m.)

3.3.2 7 hours

3.3.3 6:30 a.m. + 7 hrs

= 13:30 **OR** 1:30 p.m.

3.4 3.4.1 2 hrs + 1 hr 40 m + 20 m

= 4 hrs

3.4.2 S = 74,7 ÷ 4

= 18,675 km/h OR 19 OR 18,7 OR 18,68 km/h

QUESTION 4

4.1 4.1.1 Thirty-six million

4.1.2 1,65 billion + 0,35 bn + 2,12 bn + 1,9 bn

= $6,02 billion

OR

1 650 000 000 + 350 000 000 + 2 120 000 000 + 1 900 000 000

=$6 020 000 000

4.1.3 $\frac{2,12}{6,02} \times 100$

= 35,2%

4.1.4 (a) $\frac{1}{2} \times 111\ 000\ 000$

= 55 500 000

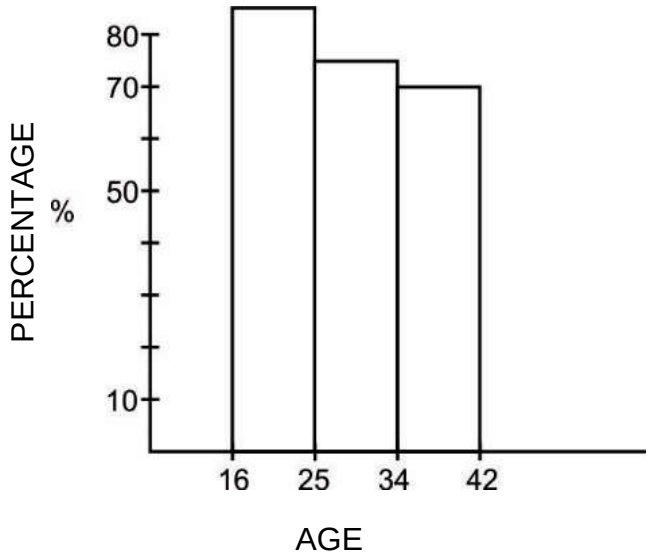
(b) $\frac{1\,650\,000\,000}{55\,500\,000}$

= $29,73

4.1.5 (a) 13,4%

(b) Batman or Cat

4.1.6 Percentage, by age, of adults who plan to dress up for Halloween



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4.2 4.2.1 $\frac{40,9 \text{ billion}}{6 \text{ m}}$

= 6 816 666 666

= \$6,82 billion

4.2.2 5,6; 6,35; 6,9;7; 7,1; 7,95

$\therefore \frac{6,9 + 7}{2}$

= \$6,95 billion

4.2.3 6 950 000 000

4.2.4 \$7,95 – \$5,6

= \$2,35 billion

QUESTION 5

5.1 5.1.1 65,3 – 27,9 = 37,4%

$\therefore$ 2015 $\rightarrow$ 2017

$\therefore$ 2 years × 365 = 730 days

5.1.2 898 221 million ℓ

$\frac{102,9}{100}$ × 898 221 mil

= 924 269,4 mil ℓ

5.1.3 $\frac{27,9 - 102,9}{102,9}$ × 100

= decrease of 72,89%

5.1.4 1 July 2017 + 2 months

$\therefore$ 1 September 2017

5.2 5.2.1 Shower, teeth and hands

= 12 ℓ

5.2.2 $\frac{3\ l}{50\ l}$ × 100

= 6%

5.2.3 $\frac{5}{50}$ × 360 = 36°

5.3 5.3.1 R29,93

5.3.2 6 × 29,93 = R179,58

5.3.3 6 000 ℓ ÷ 150

= 40 days

5.3.4

	6 × 29,93	= 179,58
	+ 4,5 × 52,44	= 235,98
	+ 9,5 × 114	= 1 083
	+③× 342	= 1 026
		R2 524,56

Total: 150 marks

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