Grade 6 | Mental Maths | Term 3
Answers

Question 1

a) 2 508 g = 2,508 kg ✓

b) $\frac{2}{5}$ kg = 400 g ✓
    2/5 of 1000g = 2 × 200g = 400g

c) 1,08 kg = 1 080 g ✓

d) 5 kg − $\frac{3}{4}$ kg = 4,25 kg ✓
    5000g − 750g = 4250g

e) 37g = 0,037 kg ✓

f) $\frac{1}{2}$ kg + $\frac{1}{5}$ kg + $\frac{1}{10}$ kg = 800g ✓
    500g + 200g + 100g

g) 23,75 kg = 23 750 g ✓

h) $\frac{1}{5}$ of 3$\frac{1}{2}$ kg = 0,7 kg ✓
    1/5 of 3500g = 700g

Total 8 /8

Question 2

a) 1,5kg × 3 = 1500g × 3 = 4,5 kg ✓

b) 250g × 8 = 2000g = 2 kg ✓

c) $\frac{1}{2}$ kg ÷ 5 = 500g ÷ 5 = 100 g ✓

d) 80g + 0,1kg + 20kg = 20,18 kg ✓

e) 2,4 kg ÷ 6 = 2400 g ÷ 6
                = 400 g ✓

f) 2$\frac{2}{5}$ kg − 0,9 kg = 1,5 kg ✓
    2400g − 900g = 1500 g

g) 2 kg ÷ 5 = 2000 g ÷ 5
              = 400 g ✓

h) 770 g + $\frac{1}{4}$ kg = 1,02 kg ✓
   770 g + 250 g = 1020 g

Total 8 /8

Question 3

Complete:

a) One packet holds 200g of sugar.

How many packets can be filled from a 1kg bag of sugar?

1000g ÷ 200g = 5 packets ✓

b) 1 kg of cheese costs R120.

Calculate the cost of:

i) $\frac{1}{2}$ kg of cheese. R120 ÷ 2 = R60 ✓
   100g of cheese. R120 ÷ 10 = R12
ii) 700g of cheese. R12 × 7 = R84 ✓

Total 3 /3

Question 4

Fill in > , < or = to make correct statements.

a) 1,05kg = 1050g > 150g ✓

b) 1,4 ton = 1400kg < 1500kg ✓

c) 500g = $\frac{1}{4}$ kg + $\frac{1}{4}$ kg = 250g + 250g ✓

d) $\frac{1}{5}$ of 1,5kg = 300g > 0,03kg = 30g ✓

e) 9,969 kg < 12 120 g = 12,12 kg ✓

f) 3kg + 0,09kg = 3090g < 3900 g ✓

Total 6 /6

Question 5

Write down the value of each underlined digit.

a)   <u>7</u>59 236   700 000 ✓

b)   3 12<u>5</u> 689   5 000 ✓

c)   18 576 6<u>3</u>2   30 ✓

d)   6<u>2</u>3 013 820   20 000 000 ✓

Complete:

Forty five million, nine hundred thousand, eight hundred and twelve is written…

Answer: 45 900 812 ✓

Total 5 /5

Question 6

The number which is:

a) 4 Th more than 3 69<u>5</u> 836 is

   3 69<u>9</u> 836 ✓

b) 7 million less than <u>12</u> 439 057 is

   5 439 057 ✓

c) 3 HTh more than <u>3 8</u>50 000 is

   <u>4 1</u>50 000 ✓

d) 15 million less than <u>220</u> 159 874 is

   <u>205</u> 159 874 ✓

Total 4 /4

Question 7

Write in short form.

a) 500 000 + 2 000 000 + 8 000

= 2 508 000 ✓

b) $5 \times 10^6 + 4 \times 10^2 + 6 \times 10^4$

= 5 060 400 ✓

c) (9 × 10 000) + <u>(8 × 10) + (9 × 10)</u>

= 90 <u>170</u> ✓

d) 2H + 5TTh + 6U + 14M

= 14 050 206 ✓

Total 4 /4

Question 8

Round off to the nearest 10:

a)   38 726 ≈ 38 730 ✓

b)   835 <u>29</u>5 ≈ 835 <u>30</u>0 ✓

c) 17 058 173 ≈ 17 058 170 ✓

Round off to the nearest 10 000:

a) 18 896 ≈ 20 000 ✓

b) 452 822 ≈ 450 000 ✓

c) <u>9 39</u>6 121 ≈ <u>9 40</u>0 000 ✓

Total 6 /6

Question 9

Insert the symbol >, < or =.

a) $696\,689 < 696\,698$ ✓

b) $46\,100 > 46 \times 10 \times 10 \,{}^{=\,4\,600}$ ✓

c) $1\,338\,838 \times 1 = 1\,338\,838 \div 1$ ✓

d) $10M + 9HTh > 1\,900\,000$ ✓
   $10\,900\,000$

e) $200\,000 + 60 > 90\,000 + 8\,000$ ✓
   $200\,060 \qquad\qquad 98\,000$

f) $\dfrac{1}{2}$ of 3 million $= 1\,500\,000$ ✓

g) $\dfrac{3}{4}$ of 1 million $\,{}^{=\,750\,000} > 340\,000$ ✓

Total **7** /7

Question 10

1. The prime numbers between

   a) 0 and 10 are **2, 3, 5, 7.** ✓

   b) 10 and 20 are **11, 13, 17, 19.** ✓

   c) 30 and 40 are **31, 37.** ✓

2. Write down the prime factor(s) of each number.

   a) 10. **2 and 5.** ✓   [~~1~~, 2, 5, ~~10~~]

   b) 12. **2 and 3.** ✓   [~~1~~, 2, 3, ~~4~~, ~~6~~, ~~12~~]

   c) 45. **3 and 5.** ✓   [~~1~~, 3, 5, ~~9~~, ~~15~~, ~~45~~]

Total **6** /6

Question 11

a) $7\,500 + 600 = 8\,100$ ✓

b) $20\,500 + 2\,500 = 23\,000$ ✓

c) $2\,580 + 1\,580 = 4\,160$ ✓

d) $20\,500 + 10\,500 = 31\,000$ ✓

e) $25\,000 + 52\,000 = 77\,000$ ✓

f) $205\,000 + 7\,000 = 212\,000$ ✓

g) $205\,080 + 55\,020 = 260\,100$ ✓

h) $205\,450 + 207\,550 = 413\,000$ ✓

Total **8** /8

Question 12

a) $250 + \underline{90} = 340$ ✓

b) $145 + \underline{75} = 220$ ✓ $[220 - 145 = 75]$

c) $2\,250 + \underline{750} = 3\,000$ ✓

d) $\underline{650} + 950 = 1\,600$ ✓

e) $\underline{30\,800} + 20\,200 = 51\,000$ ✓

f) $95\,000 + \underline{5\,750} = 100\,750$ ✓

g) $\underline{57\,000} + 82\,000 = 139\,000$ ✓

h) $323\,323 + \underline{76\,677} = 400\,000$ ✓

Total **8** /8

Question 13

a) $250 - 80 - 3 = 167$ ✓

b) $1\,000 - 150 - 25 = 825$ ✓

c) $2\,500 - 700 - 75 = 1\,725$ ✓

d) $13\,000 - 6\,000 - 250 = 6\,750$ ✓

e) $42\,800 - 3\,800 - 800 = 38\,200$ ✓

f) $32\,250 - 5\,250 - 500 = 26\,500$ ✓

g) $100\,000 - 35\,000 - 3\,500 = 61\,500$ ✓

h) $150\,000 - 70\,000 - 7\,700 = 72\,300$ ✓

Total 8 /8

Question 14

a) $105 - \underline{51} = 54$ ✓ $[105 - 54 = 51]$

b) $820 - \underline{55} = 765$ ✓

c) $\underline{2\,000} - 220 = 1\,780$ ✓
   $[1\,780 + 220 = 2\,000]$

d) $4\,000 - \underline{1\,500} = 2\,500$ ✓

e) $10\,000 - \underline{9\,085} = 915$ ✓

f) $\underline{25\,500} - 8\,000 = 17\,500$ ✓

g) $125\,450 - \underline{35\,000} = 90\,450$ ✓

h) $\underline{204\,400} - 14\,400 = 190\,000$ ✓

Total 8 /8

Question 15

Write a number sentence to show how you find each answer.

a) Add 9 to the difference between 15 and 7.

   $(15 - 7) + 9 = 8 + 9 = 17$ ✓

b) Subtract 999 from the sum of 2 500 and 1 500.

   $(2500 + 1500) - 999$
   $= 4000 - 999 = 3\,001$ ✓

Consider the number 1<u>6</u> 7<u>4</u>0 50<u>3</u>.

   The sum of the values of the 6, 4 and 3 is $6\,040\,003$ ✓

Total 3 /3

Question 16

Complete:

a) $18\,643 \approx 18\,645$ ✓
   rounded off to the nearest 5.

b) How many 125g sugar sachets can be filled from a 1kg bag of sugar? 8 sachets ✓
   because 125g × 8 = 1000g

c) The largest 2-digit prime number is 97. ✓

d) The sum of two consecutive numbers is 387.

   What are the two numbers?

   193 and 194 ✓

Total 4 /4

Question 17

Complete:

a) The sum of three numbers is 645 772.

Two of the numbers are 236 407 and 198 854. = 435 261

Find the third number.

645 772 − 435 261 = 210 511 ✓

b) How much less is 758 000 than 1 500 000?

1 500 000 − 758 000 = 742 000 ✓

c) Write 18 250 065 in words.

Eighteen million, two hundred and fifty thousand and sixty-five. ✓

                                                    Total 3 /3

Question 18

a) The temperature is 15°C.

It rises by 16°C.
New temperature = 31°C ✓

b) The temperature is 8°C.

It drops by 12°C.
New temperature = −4°C ✓

c) The temperature is −5°C.

It rises by 13°C.
New temperature = 8°C ✓

*d) The temperature is 15°C.

It drops by 30°C.
New temperature = −15°C ✓

                                                    Total 4 /4

Question 19

Write each fraction as a percentage.

a) $\dfrac{1}{5} = \dfrac{20}{100} = 20\%$ ✓

b) $\dfrac{3}{4} = \dfrac{75}{100} = 75\%$ ✓

c) $\dfrac{1}{8} = \dfrac{125}{1000} = 12\dfrac{1}{2}\%$ [or 12,5%] ✓

d) $\dfrac{24}{25} = \dfrac{96}{100} = 96\%$ ✓

e) $\dfrac{1}{2} = \dfrac{50}{100} = 50\%$ ✓

f) $\dfrac{3}{20} = \dfrac{15}{100} = 15\%$ ✓

g) $\dfrac{9,2}{10} = \dfrac{92}{100} = 92\%$ ✓

                                                    Total 7 /7

Question 20

Write each % as a fraction, in the simplest form.

a) $12\% = \dfrac{12}{100} = \dfrac{3}{25}$ ✓

b) $5\% = \dfrac{5}{100} = \dfrac{1}{20}$ ✓

c) $67\% = \dfrac{67}{100}$ ✓

d) $25\% = \dfrac{25}{100} = \dfrac{1}{4}$ ✓

e) $32\% = \dfrac{32}{100} = \dfrac{8}{25}$ ✓

f) $35\% = \dfrac{35}{100} = \dfrac{7}{20}$ ✓

g) $98\% = \dfrac{98}{100} = \dfrac{49}{50}$ ✓

                                                    Total 7 /7

Question 21

10% of $45 = \dfrac{1}{10}$ of $45 = 4,5$ ✓

50% of $130 = \dfrac{1}{2}$ of $130 = 65$ ✓

25% of $600 = \dfrac{1}{4}$ of $600 = 150$ ✓

1% of $4\,800 = \dfrac{1}{100}$ of $4800 = 48$ ✓

30% of $80 = \dfrac{3}{10}$ of $80 = 24$ ✓

15% of $2\,400 = \dfrac{3}{20}$ of $2400 = 360$ ✓

92% of $150 = \dfrac{23}{25}$ of $150 = 138$ ✓

5% of $4\,260 = \dfrac{1}{20}$ of $4260 = 213$ ✓
$[426 \div 2 = 213]$

Total **8** /8

Question 22

a) James spends 85% of his money. What % of his money is left?

   $100\% - 85\% = 15\%$ left ✓

b) Sia spends 60% of R200 on food and 25% of the <u>remaining</u> <u>money</u> on juice. How much money does she have left? **R60** ✓

60% of R200 = R120 on food
R200 − R120 = <u>R80</u> remaining
25% of <u>R80</u> = R20 on juice
R80 − R20 = R60 left

c) There are 160 learners in Gr 6 of which 55% are girls.

   How many learners are boys?
   45% of 160 = 72 boys ✓

Total **3** /3

Question 23

Fill in the missing numbers.

a) $(3 + 5) \times \underline{4} = 32.$ ✓
      8

b) $20 - (\underline{3} \times 6) = 2.$ ✓
         18

c) $(12 \times 5) \div \underline{4} = 15.$ ✓
       60

d) $85 - (26 - 19) = \underline{78}.$ ✓
            7

e) $(\underline{40} \div 5) \div 4 = 2.$ ✓
       8

f) $9 + (\underline{6} \times 6) = 15 \times 3 = 45$ ✓
          36

g) $(200 \div \underline{4}) + 2 = 80 - 28 = 52$ ✓
        50

Total **7** /7

Question 24

Complete each number pattern.

a) 14 ; 26 ; 38 ; <u>50</u> ; <u>62</u> . [+12] ✓

b) 40 ; 20 ; 10 ; <u>5</u> ; $\dfrac{5}{2}$ or $2\dfrac{1}{2}$. [÷2] ✓

c) 2 ; 3 ; 6 ; 11 ; <u>18</u> ; <u>27</u> . ✓
      +1   +3   +5   +7   +9

d) 3 ; 9 ; 27; <u>81</u> ; <u>243</u> . [×3] ✓

e) 169 ; 144 ; 121 ; 100 ; <u>81</u> ; <u>64</u>. ✓
     13×13, 12×12, 11×11, 10×10, 9×9, 8×8.

f) 310 ; 285 ; 260 ; <u>235</u> ; <u>210</u> . [−25] ✓

g) 200 ; 190 ; 170 ; 140 ; <u>100</u> ; <u>50.</u> ✓
        −10   −20   −30   −40   −50

Total **7** /7

Question 25

a) 40 km = 40 000 m ✓ [×1000]

b) 6,8 cm = 68 mm ✓   [×10]

c) 350 m = 0,35 km ✓   [÷1000]

d) 12 m = 1 200 cm ✓   [×100]

e) 12,08 km = 12 080 m ✓[×1000]

f) 300 mm = 30 cm ✓   [÷10]

g) 1 km = 100 000 cm ✓ [×1000 ×100]

h) 25 cm = 0,25 m ✓   [÷100]

Total 8 /8

Question 26

a) $\frac{1}{2}$ km = 500 m ✓

b) $1\frac{1}{4}$ km = 1 250 m ✓

c) $\frac{3}{4}$ m = 75 cm ✓

d) $\frac{1}{2}$ m + 15cm = 50 + 15 = 65 cm ✓

e) 2,1 km − $\frac{1}{4}$ km
= 2100m − 250m = 1850m = 1,85km ✓

f) 5mm + 15mm + 25mm
= 45mm = 4,5 cm ✓

g) $\frac{4}{5}$ km + <u>150</u>m = 0,95 km ✓
800m + 150m = 950m

h) $1\frac{1}{2}$ km − <u>1,3</u> km = $\frac{1}{5}$ km ✓
1500m − 1300m = 200m

Total 8 /8

Question 27

Complete:

1. Mom walks 3,5 km every day.
a) How far does Mom
   walk in 4 days?
3500 m × 4 = 14 000 m = 14 km ✓
b) How far does Mom
   walk in 10 days?
 3,5 km × 10 = 35 km ✓

2. A three metre plank of wood is
   cut into eight equal pieces.
How long is each piece of wood?
3000mm ÷ 8 = 375mm
[3000 ÷ 2 = 1500. 1500 ÷ 2 = 750. 750 ÷ 2 = 375]

Answer in mm: 375 mm ✓

Answer in cm: 37,5 cm ✓   [÷10]

Total 4 /4

Question 28

Complete:

a) How many pieces of string, each
   25cm long, can be cut from a
   1,75m roll of string?
175cm ÷ 25cm = 7 pieces ✓
[175 ÷ 5 = 35. 35 ÷ 5 = 7.]

b) Mr Smith travels at 120km/h.
   What distance does he cover
   in 15 minutes? = 1 quarter of an hour

   D = 120km/h × $\frac{1}{4}$ h = 30km ✓

c) Satin costs R180/m.
   How much will you pay for 2¼ m?
   R180 × 2 = R360   R360 + 45 = <u>R405</u>

   R180 ÷ 4 = R 45   ✓

Total 3 /3

Question 29

a) 3,2 kg = 3 200 g ✓

b) 0,001 kg = 1 g ✓

c) Half a kg = 500 g ✓

d) 1 000 ÷ 5 = 200 ✓

e) 1 000 ÷ 125 = 8 ✓

f) 1 056 kg = 1,056 t ✓

g) 4×10^5 = 400 000 ✓

h) 242 500 + 600 = 243 100 ✓

Total 8 /8

Question 30

a) 95 + 35 = 130 ✓

b) 820 − 250 = 570 ✓

c) 136 + 115 = 251 ✓

d) 123 + 87 − 18
= 210 − 18 = 192 ✓

e) 17°C − 40°C = −23°C ✓

f) 1 twentieth = 5% ✓

g) 20% of 40 = 8 ✓

h) 70% of 120 = 84 ✓

Total 8 /8

Question 31

Fill in the missing numbers.

a) (3 + 5) × 10 = 80 ✓
          8

b) 200 − (30 × 6) = 20 ✓
              180

c) (13 × 5) + 20 = 85. ✓
              65

d) 800 − (260 − 190) = 730. ✓
                        70

*e) (400 ÷ 8) ÷ 11 = 4 r 6 ✓
      50

f) 28 + (12 × 6) = 25 × 4 = 100 ✓
              72

g) (2 000 ÷ 4) × 0 = 28 − 28 = 0 ✓
                        0

Total 7 /7

Question 32

a) (5 × 20) − 12
= 100 − 12 = 88 ✓

b) (56 ÷ 8) + 22
= 7 + 22 = 29 ✓

c) 13 × 13 = 169 ✓

d) 15 × 15 = 225 ✓

e) 75 mm = 0,075 m ✓

f) 400 000 cm = 4 km ✓

g) 2,4km × 2 = 4,8 km ✓

h) 1,5m ÷ 3
= 1 500 mm ÷ 3 = 500 mm ✓

Total 8 /8