



Subject: Grade 6 Mathematics

Topic: Mathematics: Term 1 - Mini-Exam

Total: 82 Marks

1. false

2 marks

Explanation:

The rule for this pattern is 'add 125'.

$$125 + 125 = 250$$

$$250 + 125 = 375$$

$$375 + 125 = 500$$

$$500 + 125 = 625$$

2. false

2 marks

Explanation:

All 3 sides and all 3 angles of a scalene triangle are unequal.

3. 01:30 p.m. | 13:30

4 marks

Explanation:

12 hour time uses the numbers 1 to 12 to indicate hours.

a.m. indicates that the time is in the morning (before noon).

p.m. indicates that the time is in the afternoon (after noon).

24 hour time uses the numbers 00 : 00 (midnight) to 23 : 59.

A 24 hour clock indicates whether the time is in the first 12 hours of the day (before midday) or after midday.

To convert from 12 hour time to 24 hour time, add 12.

01 : 30 p.m. becomes 13 : 30.

4. 44 | 44

4 marks

Explanation:

First order the numbers from smallest to biggest:

39 40 41 42 42 44 44 44 45 47 50

The mode is the number that appears the most, namely 44.

The median is the number in the middle of the list, namely 44.

5. 2 095

3 marks

Explanation:

$$12\,755 - (4\,589 + 2\,671 + 3\,400) = 12\,755 - 10\,660 \\ = 2\,095$$



6. A: $x = 4 + 2 \times 4 + \frac{1}{2}$ of 4

4 marks

Explanation:

Samuel: 4 tries

Eli: 2×4 tries

George: $4 \div 2$ tries

Altogether:

$$\begin{aligned}x &= 4 + (2 \times 4) + \frac{1}{2} \text{ of } 4 \\&= 4 + 8 + 2 \\&= 14\end{aligned}$$

7. $2 \mid 15$

4 marks

Explanation:

08 : 55 to 09 : 55 is 1 hour.

09 : 55 to 10 : 55 is 1 hour.

$\therefore$ 2 hours

10 : 55 to 11 : 00 is 5 minutes

11 : 00 to 11 : 10 is 10 minutes

$\therefore$ 15 minutes

8. C: $4\frac{1}{6}$

4 marks

Explanation:

$$\begin{aligned}2\frac{5}{6} + 1\frac{1}{3} &= 3 + \left(\frac{5}{6} + \frac{1}{3}\right) \\&= 3 + \left(\frac{5}{6} + \frac{2}{6}\right) \\&= 3 + \frac{7}{6} \\&= 3 + \frac{6}{6} + \frac{1}{6} \\&= 3 + 1 + \frac{1}{6} \\&= 4 + \frac{1}{6} \\&= 4\frac{1}{6}\end{aligned}$$

9. false

2 marks

Explanation:

If the hundreds digit is 0; 1; 2; 3 or 4 round off the number to the lower thousand.

48 326 rounded off to the nearest thousand is therefore 48 000.

10. true

2 marks

Explanation:

Use the inverse operations when working from the output to the input.

$$12 - 4 \times 10 \div 2 = 40$$

11. D: $2x - 14 = 30$

4 marks

Explanation:

Take the number sentence apart in the following way:

Twice a number: $2x$ (this is the unknown number)

decreased by: subtract

14

is equal to: =

30

$$\begin{aligned} 2x - 14 &= 30 \\ 2x &= 30 + 14 \\ 2x &= 44 \\ x &= 44 \div 2 \\ \therefore &= 22 \end{aligned}$$

12. R267 | 267 | R267,00 | 267,00

3 marks

Explanation:

$$\begin{aligned} \text{R}300 - (\text{R}12 + \text{R}10,50 \times 2) &= \text{R}300 - (\text{R}12 + \text{R}21) \\ &= \text{R}300 - \text{R}33 \\ &= \text{R}267 \end{aligned}$$

13. B: $\frac{1}{4}; \frac{2}{6}; \frac{2}{3}; \frac{3}{4}$

4 marks

Explanation:

$$\frac{3}{4} = \frac{9}{12}$$

$$\frac{2}{6} = \frac{4}{12}$$

$$\frac{2}{3} = \frac{8}{12}$$

$$\frac{1}{4} = \frac{3}{12}$$

From smallest to biggest: $\frac{3}{12}; \frac{4}{12}; \frac{8}{12}; \frac{9}{12}$

$$\therefore \frac{1}{4}; \frac{2}{6}; \frac{2}{3}; \frac{3}{4}$$

14. true

2 marks

Explanation:

Write the words out into a number sentence:

Multiplicand: 8

Quotient: 72

Multiplier: 9

Put together: $8 \times 9 = 72$

15. $x = 72 \div 8 - 8 \mid 1$

4 marks

Explanation:

Follow the BODMAS rule:

Brackets

Of

Division / **M**ultiplication

Addition / **S**ubtraction

Divide first and then subtract:

$$\begin{aligned} x &= 72 \div 8 - 8 \\ &= 9 - 8 \\ &= 1 \end{aligned}$$

16. 15:15

3 marks

Explanation:

$$09 : 15 + 6 = 15 : 15$$

17. 60 000 | sixty thousand

3 marks

Explanation:

6 ten thousands = $6 \times 10\,000 = 60\,000$

18. Kit Kat | Crunchie | 28

6 marks

Explanation:

The blue piece of the pie graph is the largest piece: 12 children love Kit Kat chocolates.

The green piece of the pie graph is the smallest piece: 3 children love Crunchie chocolates.

Add all the numbers on the pie graph to find the total number of children in the class:

$$12 + 8 + 5 + 3 = 28$$

19. C: Square based pyramid

4 marks

Explanation:

A square based pyramid is a three-dimensional shape with 4 **flat triangular faces** and 1 **square face**, 8 **edges** (sides) and 5 **vertices** (corners).

20. true

2 marks

Explanation:

Look at the thousands: 5 000 is bigger than 4 000

21. false

2 marks

Explanation:

Divide both the numerator and the denominator by 3.

$$\frac{9}{12} \div \frac{3}{3} = \frac{3}{4}$$

22. an acute | a reflex

4 marks

Explanation:

An acute angle is smaller than 90° .

A reflex angle is bigger than 180° , but smaller than 360° .

Together, these two corresponding angles make a full circle of 360° .

23. B: $64 \div 8 \times 3$

4 marks

Explanation:

$$\begin{aligned} \frac{3}{8} \text{ of } 64 &= 64 \div 8 \times 3 \\ &= 8 \times 3 \\ &= 24 \end{aligned}$$

24. 6 302

3 marks

Explanation:

6 thousands = 6 000

3 hundreds = 300

2 units = 2

$$6\,000 + 300 + 2 = 6\,302$$

25. 42

3 marks

Explanation:

$129 \div 3 = 43$ This is the middle number.

The 3 consecutive numbers are 42; 43; 44, so the first number is 42.

Total: 82 Marks