

Answer all in 30 minutes

- 1) If a ship moves with speed of 100,000 m per hour and it makes a one full round the world, what is the minimum time required? Consider radius of the Earth is 6000 km. Assume the Earth is a perfect sphere and value of $\pi = 3.14$
- a. 4 days, 16 hours and 23 minutes
 - b. 27 days 15 hours and 18 minutes
 - c. 15 days 16 hours and 48 minutes**
 - d. 3 days, 23 hours and 48 minutes
 - e. 46 days, 11 hours and 16 minutes

- 2) What is the lowest term of $\frac{126}{846}$
- a. $\frac{12}{84}$
 - b. $\frac{3}{21}$
 - c. $\frac{7}{47}$**
 - d. $\frac{1}{7}$
 - e. $\frac{6}{51}$

Consider the number series: 6, 42, 7, 8, 17, 3, 6, 0, 11, and 5

- 3) What is its mean value?
- a. 12
 - b. 11.2
 - c. 8
 - d. 9.4
 - e. 10**
- 4) What is its mode?
- a. 42
 - b. 17
 - c. 6**
 - d. 0
 - e. 7
- 5) What is its median?
- a. 5.2
 - b. 6.5**
 - c. 7.8
 - d. 8.1
 - e. 8.4
- 6) What is its range?
- a. 6
 - b. 11
 - c. 42**
 - d. 17
 - e. 4
- 7) An angle in a triangle is a reflex angle, can it be possible?
- a. Yes, some times

$$\text{radius} = 6000 \text{ km}$$

$$\text{distance} = \text{perimeter}$$

$$= 2\pi r = 37680 \text{ km}$$

$$\text{time} = \text{distance/speed}$$

$$= 376.8 \text{ hours} = 376.8/24$$

$$= 15.7 \text{ days}$$

$$= 15 \text{ days and } 16.8 \text{ hours}$$

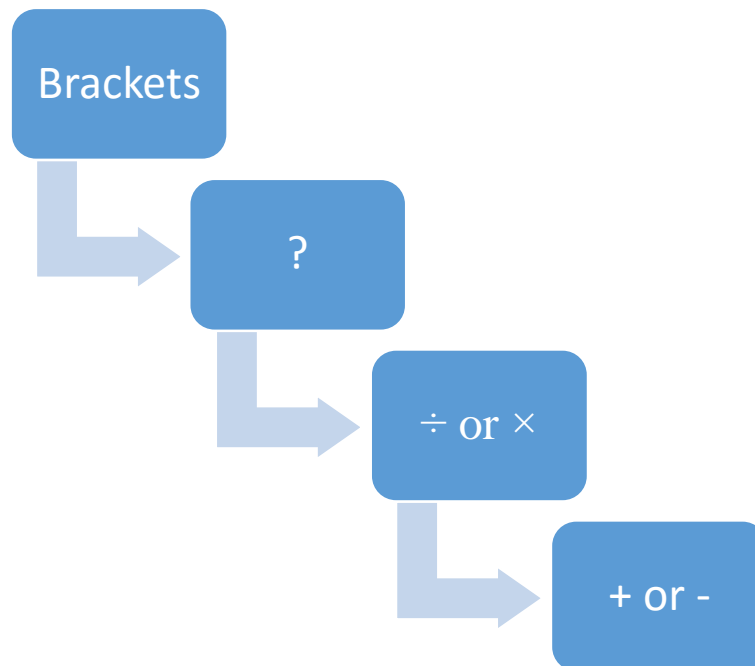
$$= 15 \text{ days, } 16 \text{ hours and } (0.8 \text{ times } 60 =) 48 \text{ minutes}$$

Ans: d

- b. **No, never**
 - c. No, but some times
 - d. Yes, but no
 - e. Yes, always
- 8) Rhombus is a
- a. Reflected rectangle
 - b. **Squashed square**
 - c. Trapezium like triangle
 - d. Pressed parallelogram
 - e. Circular cylinder
- 9) Which is not a polygon?
- a. **Circle**
 - b. Hexogen
 - c. Square
 - d. Trapezium
 - e. Rectangle
- 10) pentagonal prism has
- a. 10 vertices and 10 edges, 1 pentagon, 1 hexagon and 5 rectangles
 - b. 15 edges, 10 vertices, 1 pentagon and 5 rectangles
 - c. **10 vertices, 15 edges, 2 pentagons and 5 rectangles**
 - d. 5 vertices, 10 edges and 15 squares
 - e. None of the above
- 11) If a triangle has an obtuse angle, other two angles:
- a. Both are obtuse angles
 - b. One is obtuse and another is right angle
 - c. One is obtuse and another is acute angle
 - d. **Both are acute angles**
 - e. Both are right angles
- 12) In $x(m - n)^y + (p + n - r)m$, $x = y = n = 2$; $m = 7$; $p = 8$; $r = 0$
- a. 80
 - b. 100
 - c. **120**
 - d. 140
 - e. 146
- 13) Triangular numbers as well as factors of 18 are:
- a. 1, 2, 3, 6, 9, 18
 - b. 2, 3
 - c. **1, 3, 6**
 - d. 1, 3, 9
 - e. 2, 6, 18
- 14) A point with coordinate (5, 8) is reflected at y-axis, the reflected coordinate is:
- a. (-5, -8)
 - b. **(-5, 8)**
 - c. (8, 5)
 - d. (-8, 5)

(5, -8)

15) Order of operation in mathematics follows this order:

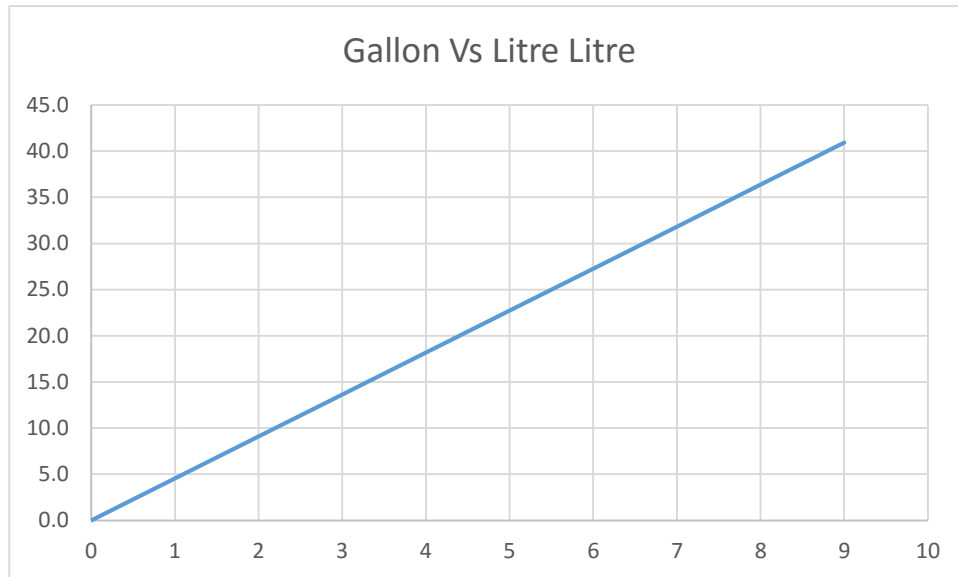


- a. Percentage (%)
- b. Ratio
- c. **Powers (exponents) or roots (such as square root or cube root)**
- d. Substitution
- e. Finding lowest common multiple

16) $2\frac{3}{4} + 7\frac{1}{4} = ?$

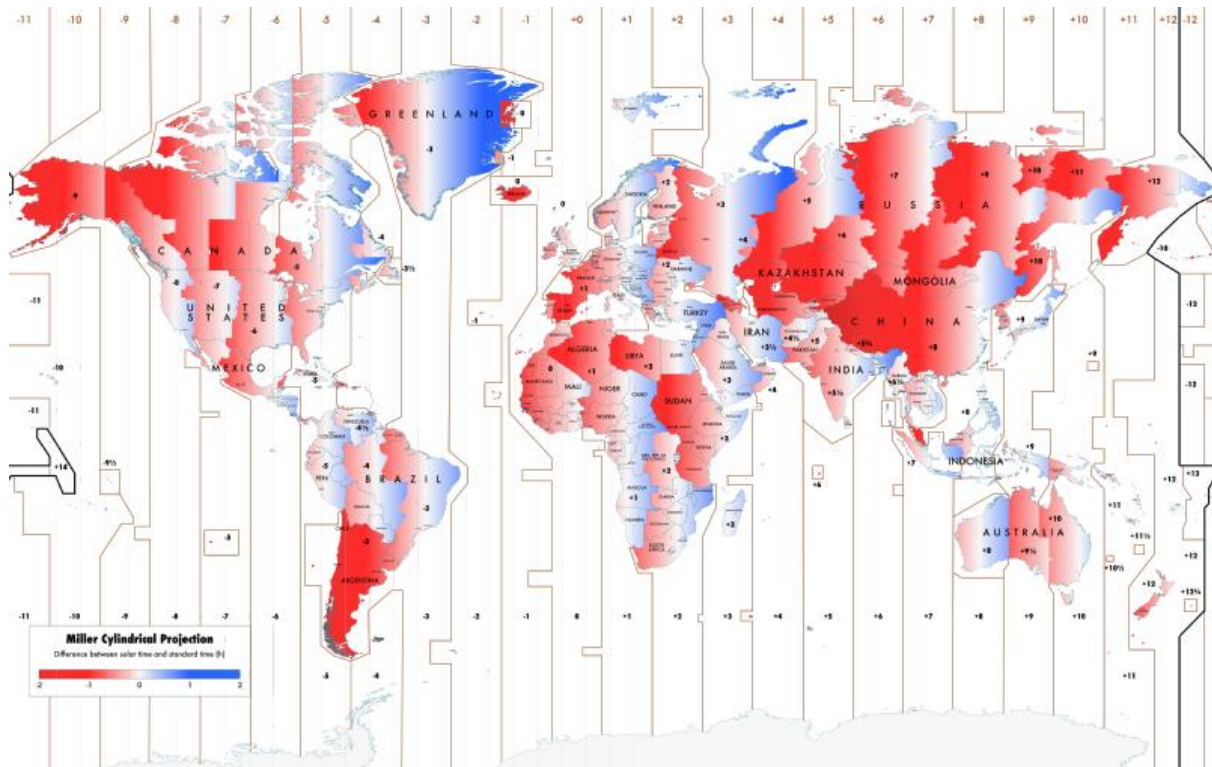
- a. $\frac{15}{4}$
- b. 20
- c. $\frac{5}{3}$
- d. **10**
- e. $\frac{21}{8}$

Using this chart chose the closest answer to the following questions.



- 17) One gallons is equal to how many litres?
- a. 30
 - b. 10
 - c. 0
 - d. 45**
 - e. 35
- 18) 900 ml packet of juice cost £1, 1 gallon packet of the same juice cost £4, what is the percentage of savings?
- a. 45%
 - b. 5%
 - c. 35%
 - d. 20%**
 - e. 0%

Using the time map bellow answers the following questions:



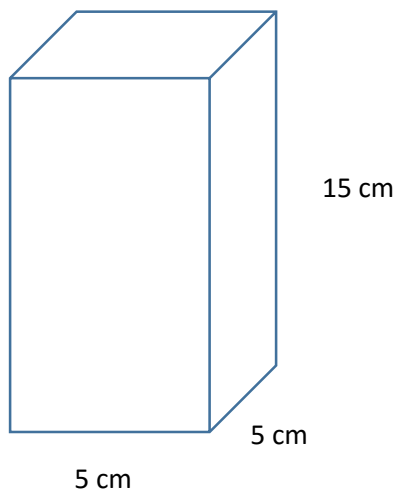
19) What is the time difference between the UK and Brazil?

- a. 5 hours
- b. 4 hours
- c. **3 hours**
- d. 2 hours
- e. One hour

20) What is the time difference between New Zeland and Brazil?

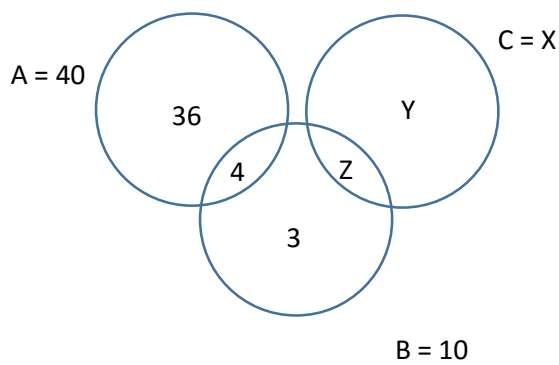
- a. 2 hours
- b. 12 hours
- c. **15 hours**
- d. 17 hours
- e. 25 hours

21) What is the volume of the cuboid



- a. 25 cm^2
- b. 25 cm^3
- c. 25 cm
- d. 375 cm^3**
- e. 375 cm^4

In this Venn diagram, $A + B + C = 80$



22) What is value of X?

- a. 24
- b. 30**
- c. 40
- d. 56

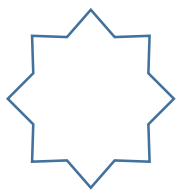
23) What is the value of Z?

- a. 1.5
- b. 2
- c. 2.5
- d. 3**
- e. 3.5

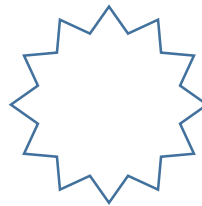
24) What is the value of Y?

- a. 9
- b. 18
- c. **27**
- d. 36
- e. 45

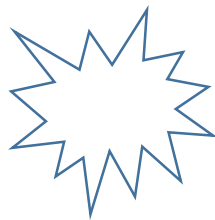
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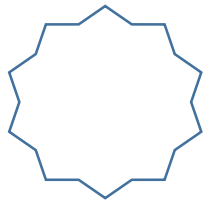
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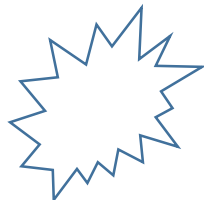
a.



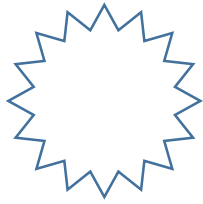
b.



c.



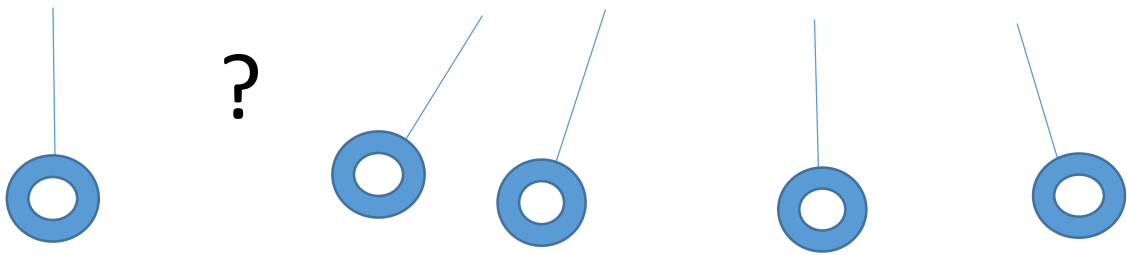
d.



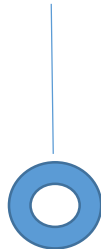
e.



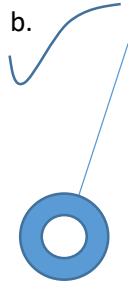
26)



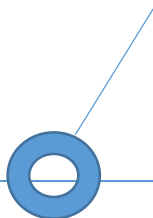
a.



b.



c.



d.



e.

