



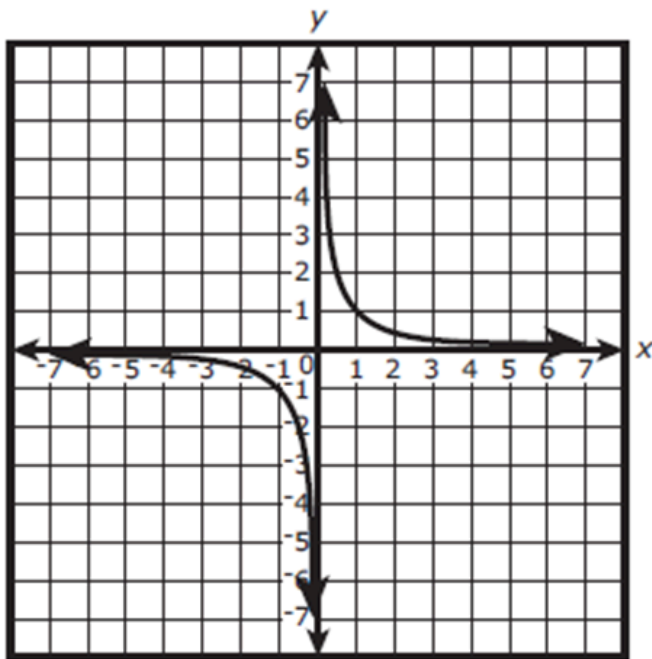
Question 1

Not answered

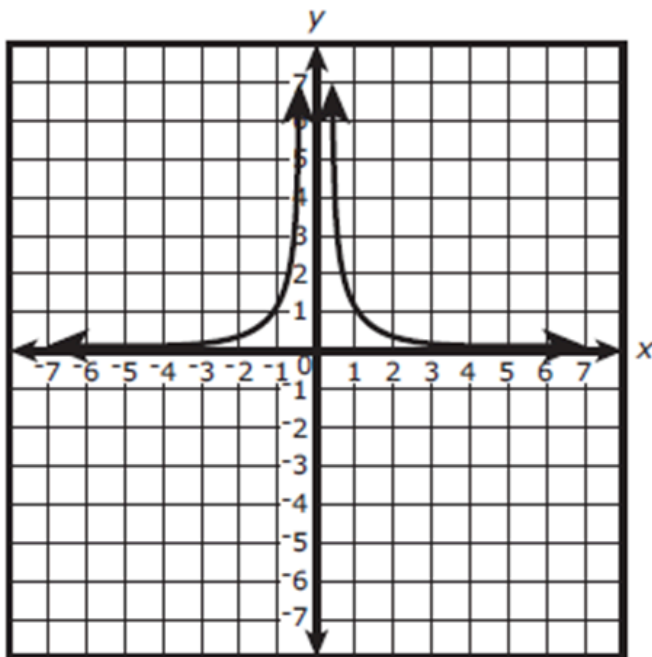
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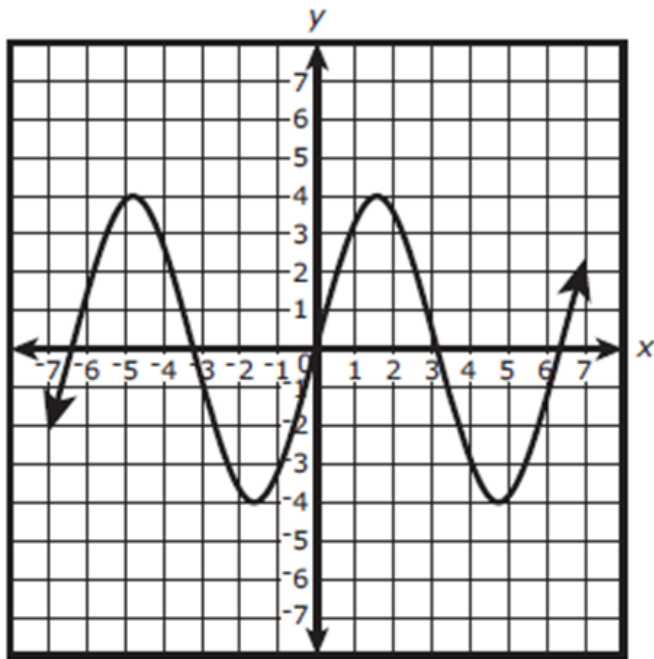
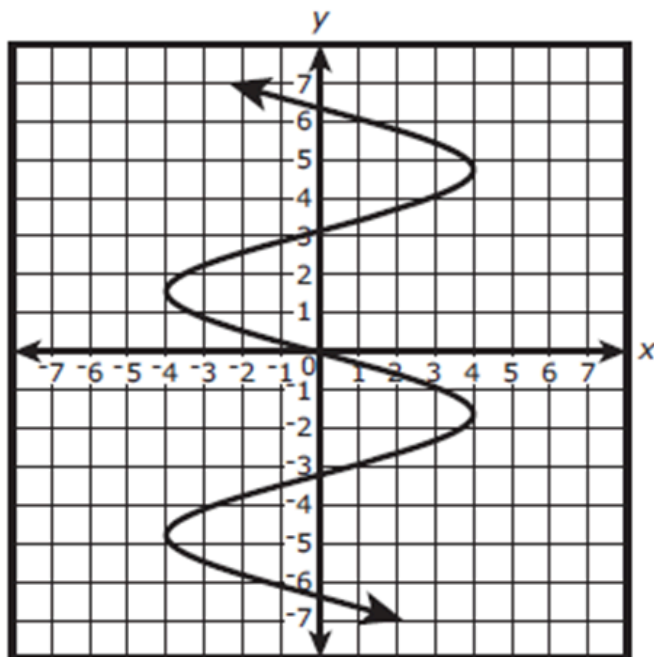
Which of the following graphs shows a relationship that is **not** a function?

☐ a.



☐ b.



☐ c.☐ d.

Question 2

Not answered

Marked out of 1.00

$$y = 2x + 4$$

$$x - y = -1$$

Which ordered pair (x, y) satisfies the system of equations shown above?

- ☐ a. $(-2, -3)$
- ☐ b. $(-2, 0)$
- ☐ c. $(-1, 2)$
- ☐ d. $(-1, 0)$
- ☐ e. $(-3, -2)$

Question 3

Not answered

Marked out of 1.00

If $c = \frac{a}{a+b}$, which of the following gives a in terms of b and c ?

- ☐ a. $a = \frac{bc}{1+c}$
- ☐ b. $a = \frac{bc}{b-c}$
- ☐ c. $a = \frac{bc}{b+c}$
- ☐ d. $a = \frac{bc}{1-c}$

Question 4

Not answered

Marked out of 1.00

$$-x^2+5x+84$$

Which of the following is equivalent to the expression above?

- ☐ a. $(12-x)(x-7)$
- ☐ b. $(12+x)(x-7)$
- ☐ c. $(21-x)(x+4)$
- ☐ d. $(12-x)(x+7)$
- ☐ e. $(21+x)(x-4)$

Question 5

Not answered

Marked out of 1.00

Calculate the following integral

$$\int_0^{\frac{\pi}{4}} \sin x dx + \int_{-\frac{\pi}{4}}^0 \cos x dx =$$

- ☐ a. 0
- ☐ b. 1/2
- ☐ c. -1
- ☐ d. 1
- ☐ e. 2

Question 6

Not answered

Marked out of 1.00

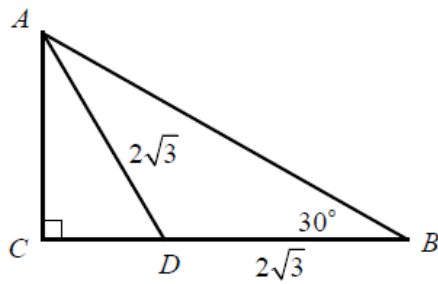
Rasul reads 5 pages of a book in 4 minutes. Based on this rate, what is the total number of minutes it will take Rasul to read 200 pages?

- ☐ a. 100 minutes
- ☐ b. 300 minutes
- ☐ c. 250 minutes
- ☐ d. 200 minutes
- ☐ e. 160 minutes

Question 7

Not answered

Marked out of 1.00



In the figure above, if $AD = BD = 2\sqrt{3}$, what is the length of AB ?

- ☐ a. 7
- ☐ b. 6
- ☐ c. 4
- ☐ d. 5
- ☐ e. 3

Question 8

Not answered

Marked out of 1.00

If $y \neq -1$ and $y \neq 0$, which of the following is equivalent to $\frac{y^2-1}{1+\frac{1}{y}}$?

- ☐ a. $\frac{y-1}{y}$
- ☐ b. $y(y-1)$
- ☐ c. $y-1$
- ☐ d. $\frac{y}{y+1}$
- ☐ e. $\frac{1}{y-1}$

Question 9

Not answered

Marked out of 1.00

$$a(2 - a) + (a^2 + 3) - (2a + 1)$$

Which of the following is equivalent to the expression shown above?

- ☐ a. 2
- ☐ b. $4a$
- ☐ c. $4a$
- ☐ d. $2a-2$
- ☐ e. $2a+2$

Question 10

Not answered

Marked out of 1.00

Which of the following is equal to

$$\frac{1}{3-2\sqrt{2}} ?$$

- ☐ a. $3 - \sqrt{2}$
- ☐ b. $3 - 2\sqrt{2}$
- ☐ c. $3 + 2\sqrt{2}$
- ☐ d. $3 + 4\sqrt{2}$
- ☐ e. $3 + \sqrt{2}$

Question 11

Not answered

Marked out of 1.00

Which of the following expressions is **NOT** equivalent to $3[6a-3(1-a)-5(a+1)]$?

- ☐ a. $12(a-2)$
- ☐ b. $24(a-0.5)$
- ☐ c. $24(0.5a-1)$
- ☐ d. $12a-24$

Question 12

Not answered

Marked out of 1.00

Find the exact solution of the equation

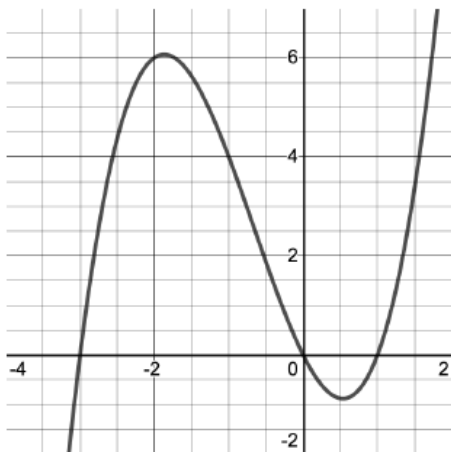
$$2\ln 6 - [\ln 168 - \ln(\frac{3}{7})] = x\ln 2$$

- ☐ a. 2
- ☐ b. 1
- ☐ c. -2
- ☐ d. -1
- ☐ e. 4

Question 13

Not answered

Marked out of 1.00

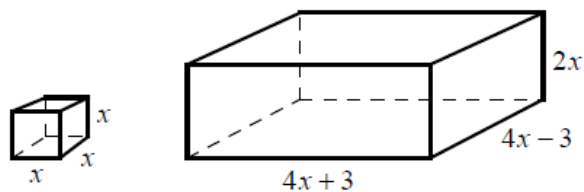
The function $f(x)$ is graphed below. Which of the following could define the function $f(x)$?

- ☐ a. $f(x)=(x+3)(x-1)$
- ☐ b. $f(x)=(x-6)(x+3)(x-1)$
- ☐ c. $f(x)=x(x+3)(x-1)$
- ☐ d. $f(x)=x(x-3)(x+1)$
- ☐ e. $f(x)=(x-3)(x+1)$

Question 14

Not answered

Marked out of 1.00



The figure above shows a cube and a rectangular prism.

If the volume of the rectangular prism is **30** times the volume of the cube, what is the value of x ?

- ☐ a. 2.5
- ☐ b. 1
- ☐ c. 1.5
- ☐ d. 2
- ☐ e. 3

Question 15

Not answered

Marked out of 1.00

On a map, 1 inch represents 5 miles. If a certain state is represented on a map by a rectangle 10 inches by 7.2 inches, what is the area of the state in square miles?

- ☐ a. 1800 mi^2
- ☐ b. 1080 mi^2
- ☐ c. 720 mi^2
- ☐ d. 360 mi^2
- ☐ e. 900 mi^2

Question 16

Not answered

Marked out of 1.00

Which of the following ordered pairs (x,y) is a solution to the system of inequalities $y > x-4$ and $x+y < 5$?

- ☐ a. $(0,-5)$
- ☐ b. $(4,-2)$
- ☐ c. $(3,2)$
- ☐ d. $(5,3)$
- ☐ e. $(0,2)$

Question 17

Not answered

Marked out of 1.00

x	$f(x)$	$g(x)$
-2	-5	0
0	6	4
3	0	-5

The table above gives values of f and g at selected values of x .

What is the value of $g(f(3))$?

- ☐ a. -2
- ☐ b. 0
- ☐ c. -5
- ☐ d. 3
- ☐ e. 4

Question 18

Not answered

Marked out of 1.00

The function f is given by

$$f(x) = 4 - \ln(2x - 1), \quad x \in \mathbb{R}, x > \frac{1}{2}.$$

Solve the equation $f(x) = f \circ f(1)$.

- ☐ a. 1
- ☐ b. 0
- ☐ c. 3
- ☐ d. 4
- ☐ e. e

Question 19

Not answered

Marked out of 1.00

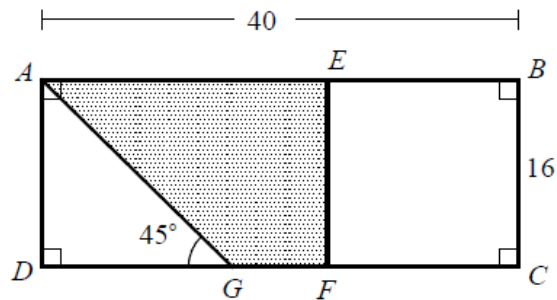
If x and y are positive integers and $12^3 = 2^x 3^y$, what is the value of $x+y$?

- ☐ a. 6
- ☐ b. 8
- ☐ c. 10
- ☐ d. 9
- ☐ e. 7

Question 20

Not answered

Marked out of 1.00



In the figure above, $ABCD$ is a rectangle and $BCFE$ is a square. If $AB = 40$, $BC = 16$, and $\angle AGD = 45^\circ$, what is the area of the shaded region?

- ☐ a. 256
- ☐ b. 248
- ☐ c. 240
- ☐ d. 264
- ☐ e. 252

Question 21

Not answered

Marked out of 1.00

Solve the following system of linear equations. Find the product $xyz=?$

$$2x+y+z=4$$

$$x+y+2z=1$$

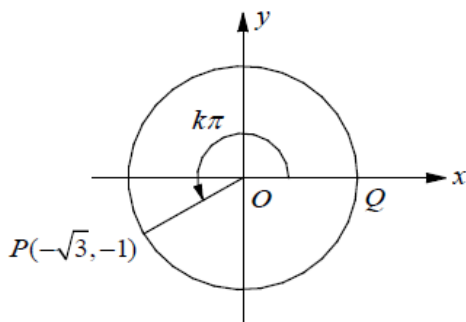
$$x-2y+z=-1$$

- ☐ a. 6
- ☐ b. -6
- ☐ c. -2
- ☐ d. 0
- ☐ e. 2

Question 22

Not answered

Marked out of 1.00



In the xy -plane above, O is the center of the circle, and the measure of the angle shown is $k\pi$ radians.

What is the value of $\tan(k\pi)$?

- ☐ a. -1
- ☐ b. $-\sqrt{3}$
- ☐ c. $\frac{1}{\sqrt{3}}$
- ☐ d. $\sqrt{3}$
- ☐ e. $-\frac{1}{\sqrt{3}}$

Question 23

Not answered

Marked out of 1.00

If $f(x) = 5x^2 - 3$ and $f(x + a) = 5x^2 + 20x + 17$, what is the value of a ?

- ☐ a. 20
- ☐ b. 3
- ☐ c. -3
- ☐ d. -30
- ☐ e. 2

Question 24

Not answered

Marked out of 1.00

Find the limit

$$\lim_{x \rightarrow 2} \frac{x^3 - 8}{x^2 - 4}$$

- ☐ a. 3
- ☐ b. ∞
- ☐ c. 4
- ☐ d. 1
- ☐ e. 0

Question 25

Not answered

Marked out of 1.00

Find second order derivative of function $f(x) = \frac{2x^2 + 3x + 4}{x}$

- ☐ a. 4
- ☐ b. $-8x^{-3}$
- ☐ c. $4x^{-3}$
- ☐ d. $8x^{-3}$
- ☐ e. $2-4x^{-2}$

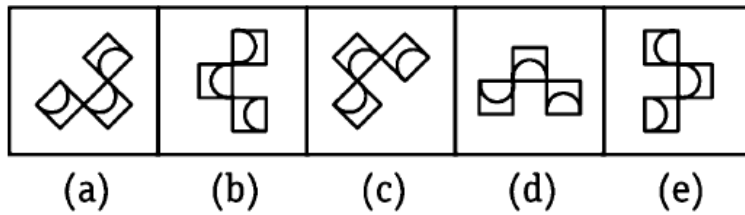
Question 26

Not answered

Marked out of 1.00

In the following question, a group of **five figures** is given. Out of which **four figures** are **similar** to each other in a certain way and **one** is **different** from other.

Find the odd figure out.

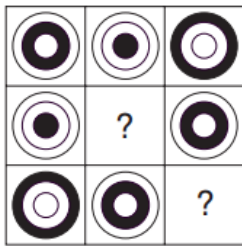


- ☐ a. (a)
- ☐ b. (c)
- ☐ c. (d)
- ☐ d. (e)
- ☐ e. (b)

Question 27

Not answered

Marked out of 1.00



Which two squares are missing?

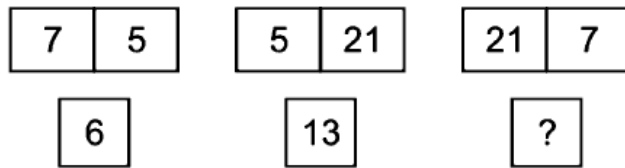
- ☐ a.
- ☐ b.
- ☐ c.
- ☐ d.
- ☐ e.

Question 28

Not answered

Marked out of 1.00

Find the missing character from the given alternatives.



- ☐ a. 8
- ☐ b. 14
- ☐ c. 4
- ☐ d. 3
- ☐ e. 20

Question 29

Not answered

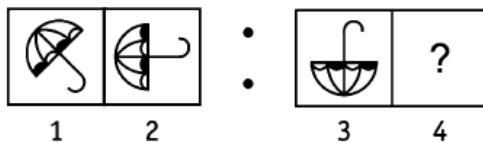
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The second figure in the first unit of the **problem figures** bears a certain relationship to the first figure.

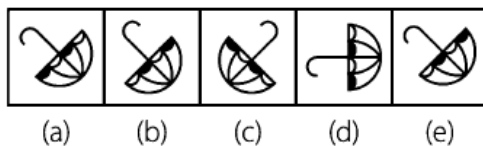
Similarly, one of the figure in the **answer figures** bears the same relationship to the first figure in the second unit of the **problem figures**.

Find the figure from the set of **answer figures** which would come in the place of question mark (?).

Problem Figures



Answer Figures



- ☐ a. e
- ☐ b. d
- ☐ c. c
- ☐ d. b
- ☐ e. a

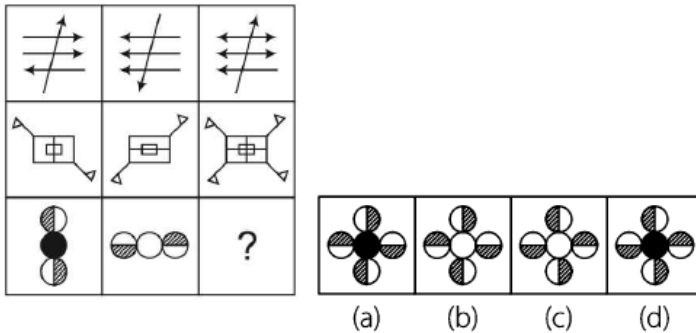
Question 30

Not answered

Marked out of 1.00

In the following question, a **problem figure matrix** is given with one or more terms missing, followed by **four answer figures**.

Find the correct answer figure that will replace?



- ☐ a. (d)
- ☐ b. (b)
- ☐ c. (a)
- ☐ d. (c)

Question 31

Not answered

Marked out of 1.00

In this type of question, **a statement/statements is/are given** followed by some conclusions.

Choose the conclusion which follows the given statement. Which of the conclusions can be drawn from the statement.

Statement

- Most of the mobile phones in that shop are costly.
- ☐ a. Mobile phone of brand X are costly in that shop
- ☐ b. None of these
- ☐ c. None of the mobile phones in that shop is cheap
- ☐ d. Some of the mobile phones in that shop are cheap
- ☐ e. Some of the mobile phones in that shop are costly

Question 32

Not answered

Marked out of 1.00

Each set of nine numbers relates to the other in a certain way. Work out the logic behind the numbers in the left-hand box in order to determine which number is missing from the right-hand box.

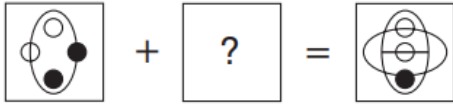
2	3	6		1	1	3
4	2	7		4	?	9
5	3	9		7	1	9

- ☐ a. 5
- ☐ b. 4
- ☐ c. 6
- ☐ d. 3
- ☐ e. 2

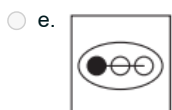
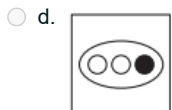
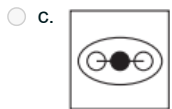
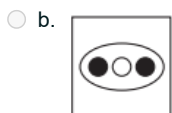
Question 33

Not answered

Marked out of 1.00



Which is the missing square?

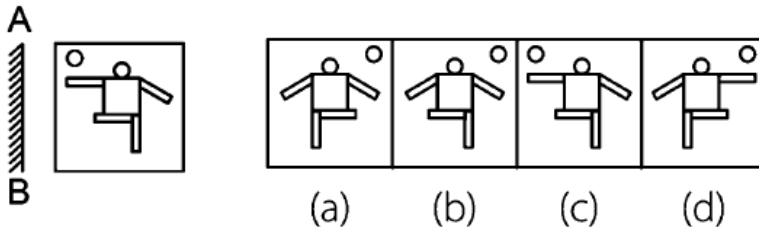


Question 34

Not answered

Marked out of 1.00

In the following question, choose the **correct mirror image** from the alternatives (a), (b), (c) and (d), when **mirror** is placed on the **line AB**.



- ☐ a. (c)
- ☐ b. (b)
- ☐ c. (d)
- ☐ d. (a)

Question 35

Not answered

Marked out of 1.00

What replaces question mark (?) in the series given below?

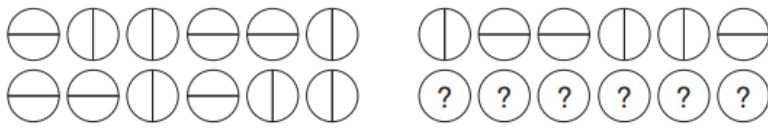
101, 100, ?, 87, 71, 46

- ☐ a. 96
- ☐ b. 92
- ☐ c. 98
- ☐ d. 94
- ☐ e. 90

Question 36

Not answered

Marked out of 1.00



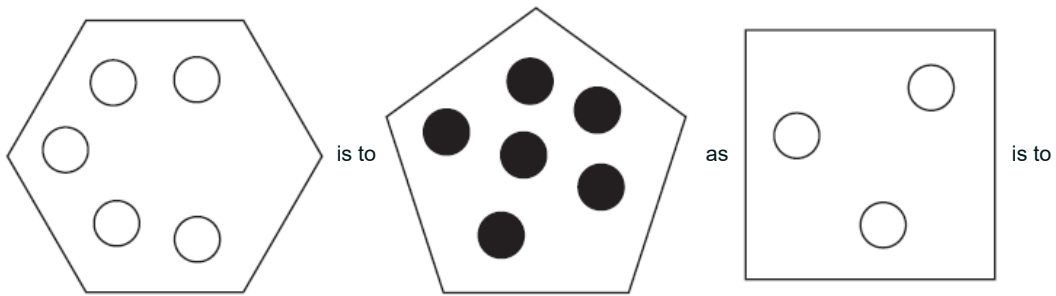
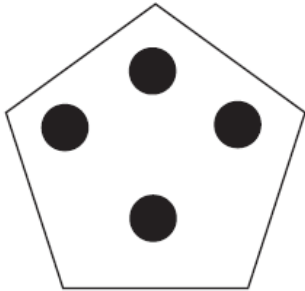
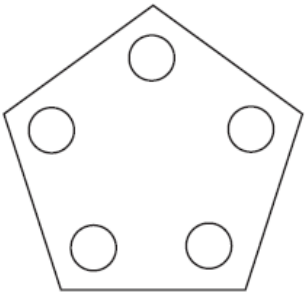
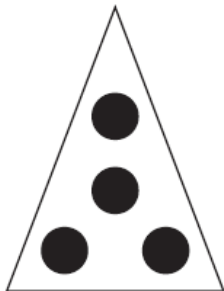
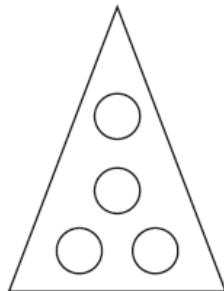
Which set of diagrams below should replace the question marks?

- ☐ a.
- ☐ b.
- ☐ c.
- ☐ d.
- ☐ e.

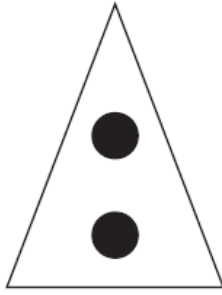
Question 37

Not answered

Marked out of 1.00

☐ a.☐ b.☐ c.☐ d.

☐ e.



Question 38

Not answered

Marked out of 1.00

In the question below, is given **a statement** followed by **three assumptions** numbered **I, II and III**. An assumption is something supposed or taken for granted, you have to consider the statement and the assumptions and decide **which of the assumption(s) is/are implicit** in the statement.

Statement “Buy pure and natural honey of company ‘X’,
an advertisement in a newspaper.

Assumptions

- I. Artificial honey can be prepared.
- II. People do not mind paying more for pure honey.
- III. No other company supplies pure honey.

- ☐ a. Only Assumption I is implicit
- ☐ b. Only Assumption II is implicit
- ☐ c. Only Assumption III is implicit
- ☐ d. I and III are implicit
- ☐ e. I and II are implicit

Question 39

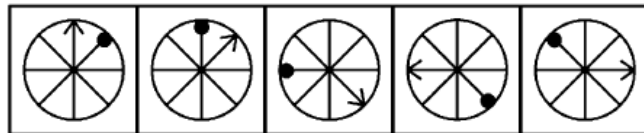
Not answered

Marked out of 1.00

In the question, a group of 5 figures following a certain sequence is given as problem figures. Problem figures are followed by another group of five figures known as answer figures marked as (a), (b), (c), (d) and (e).

Find out **one figure** from the **answer figures** which when placed **next** to the problem figures will continue the sequence of problem figures. (P.S: your choice is 6th figure)

Problem Figures



1

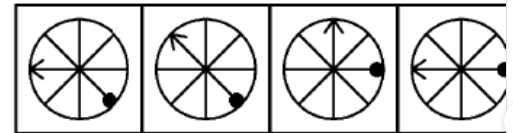
2

3

4

5

Answer Figures



(a)

(b)

(c)

(d)

- ☐ a. b
- ☐ b. a
- ☐ c. c
- ☐ d. e
- ☐ e. d

Question 40

Not answered

Marked out of 1.00

In the question below are given **two statements** followed by **two conclusions** numbered I and II. You have to take the two given **statements** to be **true** even if they seem to be at variance from commonly **known facts** and decide **which of the given conclusion(s)** logically follow(s) from the two given statements, disregarding commonly known facts.

Statements All bottlers are glasses.
No cup is a glass.

Conclusions I. No bottle is a cup.
II. Atleast some glasses are bottles.

Give answer:

- ☐ a. if only Conclusion II follows
- ☐ b. if neither I nor II follows
- ☐ c. if only Conclusion I follows
- ☐ d. if either I or II follows
- ☐ e. if both I and II follow

Question **41**

Not answered

Marked out of 1.00

Mother, please give me money.

- ☐ a. the
- ☐ b. some
- ☐ c. any
- ☐ d. a

Question **42**

Not answered

Marked out of 1.00

The baby very quiet until that terrible noise outside started.

- ☐ a. has been
- ☐ b. had been
- ☐ c. keeps
- ☐ d. 's been keeping

Question **43**

Not answered

Marked out of 1.00

..... have you been sitting here in the dark all by yourself?

- ☐ a. How long
- ☐ b. When
- ☐ c. What length
- ☐ d. Since noon

Question 44

Not answered

Marked out of 1.00

Those are

- ☐ a. child
- ☐ b. childrens
- ☐ c. childs
- ☐ d. children

Question 45

Not answered

Marked out of 1.00

Stress can also stop the brain from working at its best. Some people fight stress by imagining a beautiful box. When it's time to concentrate on something, they imagine filling that box with all the things that give them stress. Then they imagine putting that box away until they have time to deal with whatever is inside. Some people fight stress by imagining a beautiful box and filling it with things that stress them. What do they do to that box?

- ☐ a. They lock the box and imagine throwing away the key.
- ☐ b. They put it aside and take care of the problems inside later.
- ☐ c. They put the box away forever.
- ☐ d. They image putting that box

Question 46

Not answered

Marked out of 1.00

During a reading test, it can help to do a quick pre-reading exercise you have been taught, even if it is not part of the instructions. For example, try scanning the text to figure out the topic before you read the whole thing more carefully. For a writing test, pre-writing is a very important first step. Brainstorm your ideas and organize them before you start writing. Some students skip these two things, but they probably shouldn't. These activities warm up your brain so that it will work more efficiently. Why are scanning and pre-writing important when you take a test?

- ☐ a. They bring you luck.
- ☐ b. The give you confidence.
- ☐ c. They help you to understand the instructions to each section of the test.
- ☐ d. They warm the brain so it will work better.

Question **47**

Not answered

Marked out of 1.00

"Whose shoes are these?" "They are _____."

- ☐ a. belong to Ali
- ☐ b. of Ali's
- ☐ c. Ali's
- ☐ d. belonging to Ali

Question **48**

Not answered

Marked out of 1.00

Everywhere they for water they struck oil.

- ☐ a. sank
- ☐ b. dropped
- ☐ c. dug
- ☐ d. bent

Question **49**

Not answered

Marked out of 1.00

Which is a plural noun?

- ☐ a. Bus
- ☐ b. Teeth
- ☐ c. Dress
- ☐ d. Foot

Question **50**

Not answered

Marked out of 1.00

He wants sugar.

- ☐ a. a
- ☐ b. the
- ☐ c. some
- ☐ d. any