

Math

Model Exam (1)

Question 1:

- Answer the following:

- a- $65.3814 + 63.4027 = \dots \simeq \dots$ (to the nearest $\frac{1}{1000}$)
- b- $53.27 - 2.1 = \dots \simeq \dots$ (to the nearest tenth)
- c- $(3.425 + 1.07) \div 2.8 = \dots \simeq \dots$ (to the nearest hundredth)
- d- $9.568 \div 9 \frac{1}{5} = \dots \simeq \dots$ (to the nearest whole number)
- e- $\dots \div 9 = 4.5$
- f- The chord of a circle is a line segment that connects
- g- 2.9 ton = kg
- h- A box contain 24 lamps, 3 lamps are defective. A lamp has been randomly selected, the probability of getting a functional lamp =
- i- If $X = \{2, 3\}$, $Y = \{3, 5\}$, then $X \cap Y = \dots$
- j- 254 hours $\simeq \dots$ days

Question 2:

- A) The area of a rectangle is 9.43 cm^2 and its width is 2.45 cm. find its length and approximate it to the nearest hundredth of centimeter.

Math

B) Compare:

a- $0.46 \div 4.6$

0.01

b- 17.17×1.7

39

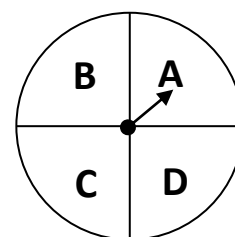
c- $53.7 \div 3.5$

$5.37 \div 0.35$

d- $845 \div 4.9$

$(84.5 \div 49) \times 0.1$

Question 3:



A) A spinner is divided into 4 equal sections.

a- What is the probability of spinning the letter B?

b- Spin the spinner 400 times. What is the predicted number of getting letter A?

B) Draw a circle whose centre is M and radius is 2.5 cm. then draw its diameter \overline{AB} and draw its chord \overline{AC} of length 3 cm. Draw \overline{BC} then find its length.

Question 4:

A) If $U = \{1, 2, 3, 4, 5, 6\}$, $X = \{2, 3, 5\}$ and $Y = \{3, 4, 5\}$

Represent the sets by Venn diagram. Then write each of the following by listing method:

a) $X \cup Y$

b) $X \cap Y$

c) $X - Y$

d) X'

B) Find the product of 58.62×35.2 and approximate it to the nearest hundredth.

Math

Question 5:

- Choose the correct answer:

- a- The number of subsets for the set $\{5\}$ is (0 – 1 – 2 – 3)
- b- If M is a circle whose diameter is 8 cm where MA = 7 cm then the point A is located (inside – outside – on) the circle.
- c- $654 \div 76 = 6.54 \div \dots$ (76 – 0.76 – 7.6)
- d- If $X \subset Y$ then $X \cap Y = \dots$ ($X - Y - \emptyset - U$)
- e- $\emptyset \dots \{0\}$ ($= - \subset - \not\subset - \in$)

Question 6:

- A) Draw the isosceles triangle ABC in which BC = 4 cm, and AB = AC = 6 cm
Then, draw perpendicular segments from their vertices to their three sides.

- B) The following table lists the results of a survey applied on 100 spectators of T.V

| Program | Arabic films | Foreign films | Series | News | Football matches |
|----------------------|--------------|---------------|--------|------|------------------|
| Number of spectators | 19 | 20 | 15 | 10 | 36 |

A spectator has been randomly selected. Find the probability of selecting a spectator prefers:

- a- Football matches b- foreign films c- series d- news

Math

Model Exam (2)

Question 1:

- Find the following:

a- $729.72 - 122.7435 = \dots \simeq \dots$ (to the nearest hundredth)

b- $1.623 \div 0.152 = \dots \simeq \dots$ (to the nearest tenth)

c- $984.45 + 73.2 = \dots \simeq \dots$ (to the nearest unit)

d- $1.775 \times 0.15 = \dots \simeq \dots$ (to the nearest $\frac{1}{1000}$)

e- $4\frac{1}{2} \div 0.5 = \dots$

f- $X \in \{2, 5\} \cap \{3, 5\}$, then $X = \dots$

g- $8.56 \text{ m} = \dots \text{ km}$

Question 2:

A) A card has been randomly drawn out of 10 cards numbered from 1 to 10

Find the probability of getting:

a- An odd number

b- A prime number

c- An even number greater than 6

B) Draw the triangle ABC in which $AB = 7 \text{ cm}$, $BC = CA = 6 \text{ cm}$. then, draw the line segment from point C that is perpendicular to \overline{AB} and find its length.

Question 3:

A) Complete:

a- If $\{1, X\} = \{2, Y\}$, then $X = \dots\dots\dots$, $Y = \dots\dots\dots$

b- The longest chord in a circle is called

c- The probability of failing a student is $\frac{2}{15}$, The probability of success =

d- 72 days \simeq weeks

e- $\{2, X\} \cap \{3, 7\} = \{3\}$, then $X = \dots\dots\dots$

f- The difference between $\frac{9}{16}$ and 0.5734 is

B) The area of a rectangle is 10.25 square meters, and its length is 4.1 meters. Find its width and perimeter.

Question 4:

A) Look at the opposite Venn diagram and find the following sets using the listing method:

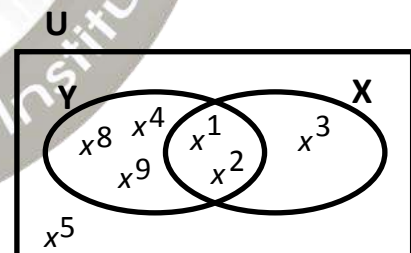
a) $X \cup Y$

b) $X \cap Y$

c) $X - Y$

d) Y'

e) $(X \cup Y)'$



B) Find the number that if multiplied by 0.37, then the result is 17.8932

Math

C) Choose the correct answer:

- a- The number of altitudes in any triangle = (1 – 2 – 3)
- b- $\{1,7\}$ $\{0, 1, 2, 3, 4, \dots\}$ (\in – \notin – \subset – \supset)
- c- $12 \frac{1}{2} \times \frac{4}{5} = \dots\dots\dots$ (10 – 100 – 50)
- d- If \overline{AB} , \overline{AC} are two chord in a circle, then \overline{BC} is a(chord – diameter – radius) in the same circle.
- e- $5698.65 \div 100 = \dots\dots\dots$ (569865 – 56.9865 – 5.69865)
- f- $X - X = \dots\dots\dots$ (\emptyset – zero – $\{0\}$ – $\{1\}$)

Question 5:

A) Rolling a regular number cube (die). what is the probability of getting an even number and not divisible by 3?

B) Put (✓) for the true sentence and (✗) for the false one:

- a- The quotient of dividing 265.88 by 2.6588 = 100 ()
- b- The length of the diameter of a circle > the length of any chord which doesn't pass through its center ()
- c- $8 \in \{5, 7\}$ ()
- d- $439.71 \times 1000 = 439710$ ()
- e- The line segments drawn from the vertices of the acute triangle perpendicular to the opposite sides intersect at one point inside the triangle. ()

Question 6:

A) Draw a circle whose center is N and diameter is 6 cm. then draw the diameter \overline{AB} and the chord \overline{AC} in the circle. Draw \overline{BC} . Use the protractor to measure $\angle ACB$, then draw $\overrightarrow{CD} \perp \overline{AB}$ that intersects it at D and the circle at E , then choose the correct answer:

- a- The triangle ABC is
(right triangle – acute triangle – obtuse triangle)
- b- \overline{CE} is in the circle (chord – diameter – radius)
- c- The intersection point of the perpendicular line segments drawn from the vertices of the triangle ABC to the opposite sides is ...
(C – D – E)

B) Divide 375 by 0.5 then add $5\frac{1}{4}$ to the quotient.

Math

Model Exam (3)

Question 1:

- Find the following:

a- $75.32489 \times 10 = \dots \approx \dots$ (to the nearest thousandth)

b- $12.46 \div 0.517 = \dots \approx \dots$ (to the nearest tenth)

c- $700.14 + 55.009 = \dots \approx \dots$ (to the nearest unit)

d- $7.52 \div (14.73 - 11.58) = \dots \approx \dots$ (to the nearest $\frac{1}{100}$)

e- $2\frac{1}{8} \div 0.125 = \dots$

f- If $4 \in \{2, X, 7\}$, then $X = \dots$

g- The midpoint of any diameter in a circle is of the circle.

h- A card has been drawn out of 5 cards containing the numbers:

32

25

14

63

27

The probability of selecting a number that the sum of its two digits is 9 =
.....

Question 2:

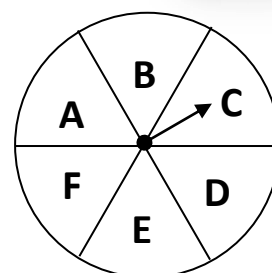
A) Draw the triangle XYZ in which $XY = 3$ cm, $YZ = 5$ cm, $ZX = 7$ cm.

determine the types of the triangle according to the measures of its angles, then draw the perpendicular segment from X to \overline{YZ} and measure its length.

Math

B) A spinner is divided into 6 equal sections.

- a- What's the probability of spinning on any section?
- b- Spinning the spinner 60 times. How many times are predicted to get the letter (A) as an outcome?



Question 3:

A) Rearrange the following fractions descendingly: $\frac{1}{2}$, 0.8 , $\frac{1}{4}$, 0.3

B) The side length of a square is 5.06 meters.

Find its area approximating it to the nearest hundredth.

C) If $X = \{3, 4, 5\}$, $Y = \{2, 3, 4\}$

Place the suitable symbol \in or \notin or \subset or $\not\subset$ in the blanks.

- a- 2 X
- b- $\{3, 2\}$ $X \cup Y$
- c- \emptyset Y
- d- $\{3, 5\}$ $X \cap Y$
- e- 5 $X - Y$
- f- $\{2, 3, 4\}$ X

Question 4:

A) The following table lists the number of 120 volunteers in 3 groups to make uniforms for cleaners.

| Group | Design | Printing | Distribution |
|----------------------|--------|----------|--------------|
| Number of volunteers | 30 | 30 | 60 |

A volunteer has been randomly selected. What is the probability to be one of the printing group?

B) A truck can hold 125 boxes of oranges at a time. How many times are needed to deliver 4375 boxes by that truck?

Question 5:

A) Choose the correct answer from the parentheses:

a- If $\{2, 5, 7\} = \{5, A, 2\}$ then $A = \dots$ (2 – 5 – 7 – 0)

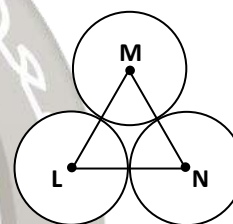
b- If A, B belong to the circle M where $M \in \overline{AB}$ then \overline{AB} is called a
(chord – diameter – radius) in the circle.

c- $78.26 \div 10 \dots 7.826 \times 10$ (> or = or <)

d- $\{5\} - \{1, 2, 5\} = \dots$ ($\{5\} - \{1, 2\} - \emptyset - \{1, 2, 5\}$)

e- If $a \in X$ then $a \dots X$ ($\in - \notin - \subset - \not\subset$)

f- In the opposite figure,
If the length of each radius in the
three circles is 3 cm, then the perimeter
of the triangle MLN = (6 – 9 – 18) cm



B) Draw a circle whose center is M and radius 2 cm then draw two radii \overline{MX} , \overline{MY} and the included angle between them measures 60° then draw \overline{XY} and find the length of \overline{XY} .

Model Exam (4)

Answer the following questions :

1 Complete each of the following :

[a] $457.6 \div 100 = \dots \approx \dots$ (to the nearest tenth)

[b] If $X \subset Y$, then $X \cup Y = \dots$

[c] $\frac{5}{7} \times \dots = 1$

[d] If $\{2, x+1\} = \{6, 2\}$, then $x = \dots$

2 Choose the correct answer :

[a] $\{43\} \cap \{4, 3\} \dots$ ($\{3\}$ or $\{4\}$ or $\{43\}$ or \emptyset)

[b] If the length of the radius of a circle is 5 cm. , then the length of the longest chord = \dots cm. (2 or 8 or 6 or 10)

[c] Any triangle has \dots altitudes (1 or 2 or 3 or 4)

[d] $12 \div \frac{4}{3} = \dots$ (9 or 16 or 6 or 8)

3 [a] Find the result then approximate :

(1) $4.52 \times 0.3 = \dots \approx \dots$ (to the nearest 2 decimal place)

(2) $24.7 - 7\frac{1}{2} = \dots \approx \dots$ (to the nearest unit)

(3) $2.46 \div 0.6 = \dots$

[B] Arrange in an ascending order :

7.8 , 7.75 , $6\frac{1}{4}$ and 6.4

4 [a] If $U = \{1, 2, 3, 4, 5, 6, 7, 8\}$, $X = \{2, 4, 5, 6\}$ and $Y = \{4, 5, 7\}$

Represent these sets by Venn diagram then find :-

(1) $X \cap Y$

(2) $X \cup Y$

(3) $X - Y$

(4) X^c

[b] Complete using (\in , \notin , \subset or $\not\subset$) :

(1) $9 \dots \{4, 6, 9\}$

(2) $\{8\} \dots \{0, 2, 4, 6, \dots\}$

(3) $\emptyset \dots \{0\}$

- 5** [a] Draw the triangle ABC in which $AB = 8 \text{ cm.}$, $BC = 6 \text{ cm.}$ and $AC = 10 \text{ cm.}$
 , then complete : $m(\angle B) = \dots\dots\dots^\circ$

[b] **Complete :**

- (1) The probability of the impossible event =
- (2) As throwing a metallic coin once , then the number of elements of the sample space =
- (3) As throwing a fair die once , then the probability of appearing :
- (a) An even number =
- (b) A number greater than 4 =

Math

Model Exam (5)

Answer the following questions :

1 Complete :

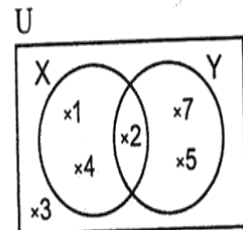
- [a] \emptyset $\{a, b\}$ [b] It is that the sun rises from west.
 [c] As throwing a fair die once , then the probability of appearing a number less than 3 is
 [d] The altitudes of the right-angled triangle intersect at

2 Choose the correct answer :

- [a] $63.594 \approx 63.6$ (to the nearest)
 (0.1 or 0.01 or 0.001 or 10)
 [b] $3 \frac{1}{2} \div \frac{7}{12} = \dots\dots\dots$ (6 or $\frac{18}{2}$ or $\frac{50}{12}$ or 4)
 [c] $3 \dots\dots\dots \{303, 13\}$ (\in or \notin or \subset or $\not\subset$)
 [d] The chord which passes through the centre of the circle is called
 (a diameter or a radius or a tangent or a side)

- 3 [a] Arrange ascendingly : $14\frac{1}{4}$, 15.025 , 14.375 and $14\frac{1}{8}$
 [b] From the opposite Venn diagram , write the following sets :

- (1) \bar{X}
 (2) $X \cup Y$
 (3) $X \cap Y$
 (4) $Y - X$



Math

4 [a] Draw the equilateral triangle ABC whose side length = 5 cm. , then draw $\overline{AD} \perp \overline{BC}$

[b] Find the area of the square whose side length is 5.02 m..
approximating the result to the nearest tenth.

5 [a] If the price of a piece of sweet is 2.5 pounds. What is the price of 25 pieces of the same kind ?

[b] A bag contains 5 white balls , 9 red balls and 6 black balls , all the balls are identical and equal in the size. If a ball is drawn randomly. What is the probability that the drawn ball is :

(1) Not white.

(2) White or red.

Answers Model Exam (1)

Question 1:

a- $128.7841 \approx 128.784$

b- $51.17 \approx 51.2$

c- $4.495 \div 2.8 = 44.950 \div 28 = 1.605 \approx 1.61$

d- $9.568 \div 9.2 = 95.68 \div 92 = 1.04 \approx 1$

e- $4.5 \times 9 = 40.5$

f- between any two points on the circle

g- $2.9 \text{ ton} \times 1000 = 2900 \text{ kg}$

h- Functional lamps = $24 - 3 = 21$, so the probability of getting a functional lamp = $\frac{21}{24} = \frac{7}{8}$

i- $X \cap Y = \{3\}$

j- $254.0 \div 24 = 10.5 \approx 11 \text{ days}$

Question 2:

A) Area = $L \times W$

Length = $\text{area} \div \text{width}$

= $9.43 \div 2.45 = 943.000 \div 245 = 3.848 \approx 3.85 \text{ cm}$

B)

a- $0.1 > 0.01$

b- $29.189 < 39$

c- $=$

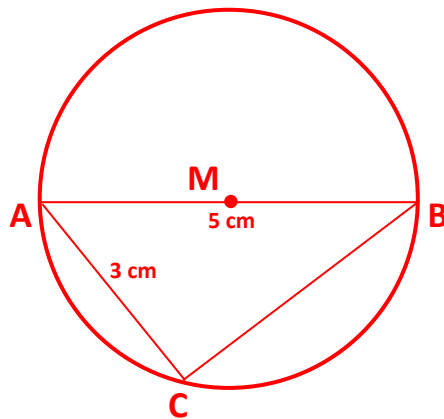
d- $172.4489 > 0.17244$

Question 3:

A) a- $\frac{1}{4}$

b- First the probability of getting letter A = $\frac{1}{4}$, then the predicted number of getting letter A = $400 \times \frac{1}{4} = 100 \text{ times}$

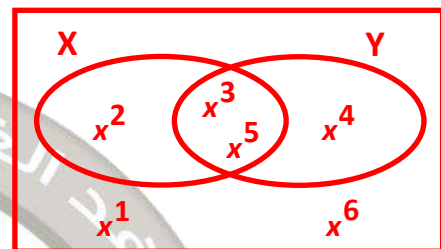
B) $BC = 4 \text{ cm}$



Question 4:

- A) a) $\{2, 3, 4, 5\}$
 b) $\{3, 5\}$
 c) $\{2\}$
 d) $\{1, 4, 6\}$

U



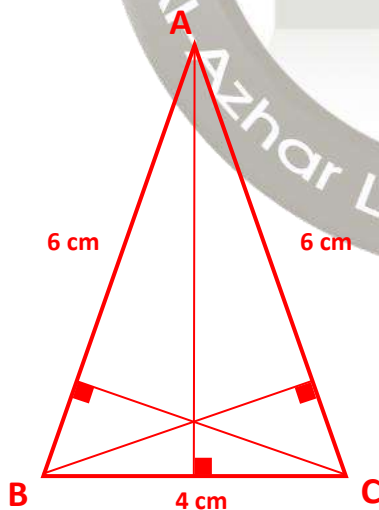
B) $58.62 \times 35.2 = 2063.424 \approx 2063.42$

Question 5:

- a- 2 b- Outside c- 0.76 d- X e- C

Question 6:

A)



B)

a- $\frac{36}{100} = \frac{9}{25}$

b- $\frac{20}{100} = \frac{1}{5}$

c- $\frac{15}{100} = \frac{3}{20}$

d- $\frac{10}{100} = \frac{1}{10}$

Model Exam (2)

Question 1:

a- $606.9765 \approx 606.98$

b- $10.68 \approx 10.7$

c- $1057.65 \approx 1058$

d- $0.26625 \approx 0.266$

e- $\frac{9}{2} \div \frac{5}{10} = \frac{9}{2} \times \frac{10}{5} = \frac{90 \div 10}{10 \div 10} = \frac{9}{1} = 9$

f- 5

g- $8.56 \text{ m} \div 1000 = 0.00856 \text{ km}$

1.775

×

0.15

8875

17750

0.26625

10.68

152

1623.55

-152

1030

-912

1235

-1216

R= 19

Question 2:

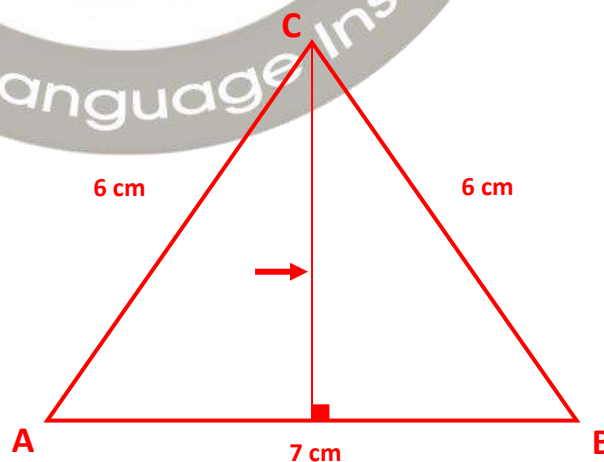
A)

a- The probability of getting an odd number = $\frac{5}{10} = \frac{1}{2}$

b- The probability of getting a prime number = $\frac{4}{10} = \frac{2}{5}$

c- The probability of getting an even number greater than 6 = $\frac{2}{10} = \frac{1}{5}$

B) Length of line segment = 5cm



Math

Question 3:

A) a) $X = 2$ and $Y = 1$

b) Diameter

c) The probability of success $= 1 - \frac{2}{15} = \frac{13}{15}$

d) $72 \div 7 = 10.2 \approx 10$ weeks

e) $X = 3$

f) $\frac{9}{16} = 0.5625$, the difference $= 0.5734 - 0.5625 = 0.0109$

B) Area $= L \times W$

$$W = 10.25 \div 4.1 = 102.5 \div 41 = 2.5 \text{ m}$$

$$\begin{aligned} \text{Perimeter} &= (L + W) \times 2 \\ &= (4.1 + 2.5) \times 2 \\ &= 6.6 \times 2 = 13.2 \text{ m} \end{aligned}$$

$$\begin{array}{r} 002.5 \\ 41 \overline{) 102.5} \\ \underline{-82} \\ 205 \\ \underline{-205} \\ 00 \end{array}$$

Question 4:

A)

a- $\{4, 8, 9, 1, 2, 3\}$

b- $\{1, 2\}$

c- $\{3\}$

d- $\{3, 5\}$

e- $\{5\}$

B) $\times 0.37 = 17.8932$

$$17.8932 \div 0.37 = 1789.32 \div 37 = 48.36$$

C)

a- 3

b- \subset

$$c- \frac{5}{2} \times \frac{2}{5} = 10$$

d- Chord

e- 56.9865

f- \emptyset

$$\begin{array}{r} 0048.36 \\ 37 \overline{) 1789.32} \\ \underline{-148} \\ 309 \\ \underline{-296} \\ 133 \\ \underline{-111} \\ 222 \\ \underline{-222} \\ 000 \end{array}$$

Question 5:

A) $\frac{2}{6} = \frac{1}{3}$

B)

a- (✓)

b- (✓)

c- (✗)

d- (✓)

e- (✓)

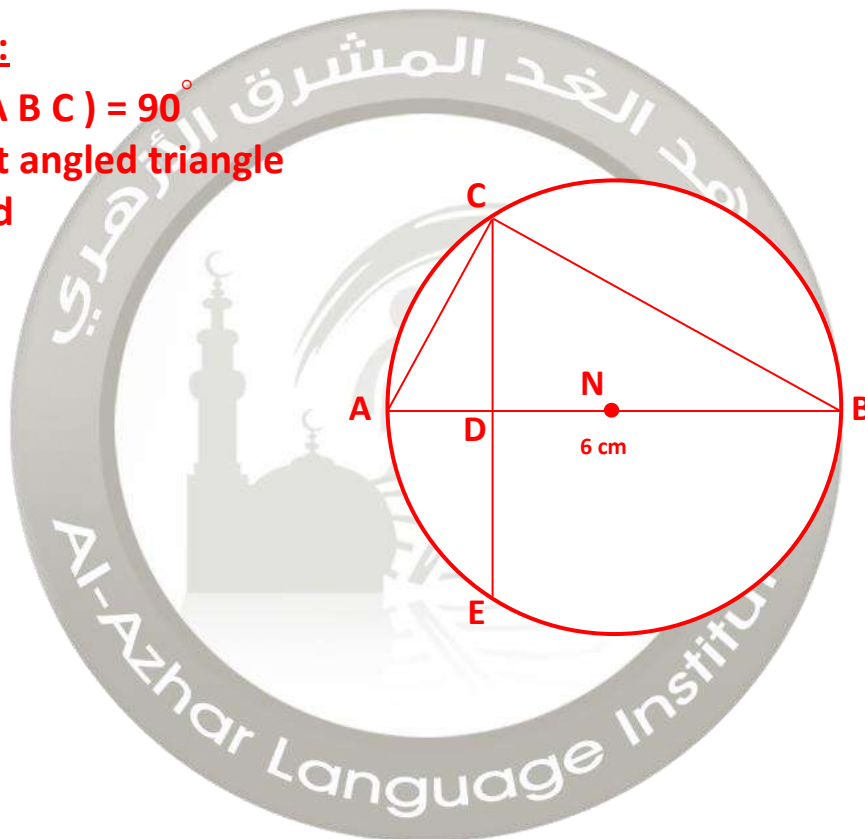
Question 6:

A) $M(\angle ABC) = 90^\circ$

a- Right angled triangle

b- Chord

c- C



B) $375 \div 0.5 + 5 \frac{1}{4} = 750 + 5 \frac{1}{4} = 755 \frac{1}{4}$

Model Exam (3)

Question 1:

a- $753.2489 \approx 753.249$

b- $12460 \div 517 = 24.10 \approx 24.1$

c- $755.149 \approx 755$

d- $7.52 \div 3.15 = 2.3873 \approx 2.39$

e- $\frac{17}{8} \div \frac{125}{1000} = \frac{17}{8} \times \frac{1000}{125} = 17$

f- $X = 4$

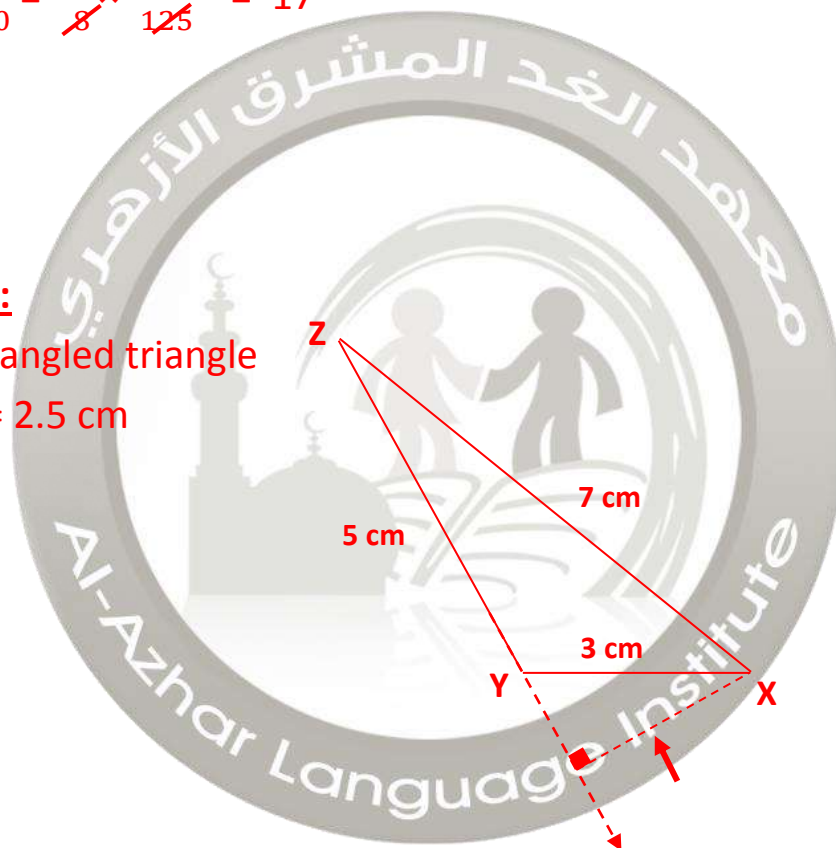
g- Center

h- $\frac{2}{5}$

Question 2:

A) Obtuse angled triangle

Length = 2.5 cm



B)

a- $\frac{1}{6}$

b- The probability of getting letter A = $\frac{1}{6}$

So, the number of times are predicted to get letter A = $60 \times \frac{1}{6}$
= 10 times

Question 3:

A) Answer : 0.5 , 0.8 , 0.25 , 0.3

Arrange : 0.80 , 0.50 , 0.30 , 0.25

B) Area = $S \times S$

$$= 5.06 \times 5.06 = 506 \times 506 = 25.6036 \text{ m}^2 \simeq 25.60 \text{ m}^2$$

C)

a- \notin

b- \subset

c- \subset

d- \notin

e- \in

f- \notin

Question 4:

A) The probability to be one of the printing group = $\frac{30}{120} = \frac{1}{4}$

B) The number of times needed = $4375 \div 125 = 35$ times

Question 5:

A)

a- 7

b- Diameter

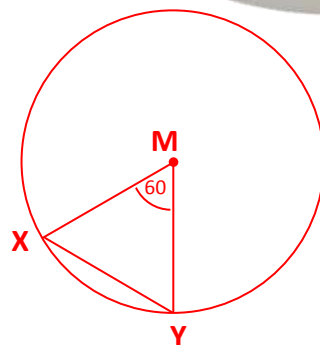
c- $<$

d- \emptyset

e- \notin

f- One side = 6 cm , perimeter = $6 + 6 + 6 = 18$ cm

B) XY = 2 cm



Model Exam (4)

1) Complete:-

a) $4.576 \approx 4.6$

b) Y

c) $\frac{7}{5}$

d) $X = 5$

2) Choose:-

a) \emptyset

b) 10

c) 3

d) $1\frac{3}{4} \times \frac{3}{4} = 9$

3) Find:-

1) $1.356 \approx 1.36$

2) $17.2 \approx 17$

3) 4.1

b) Arrange in an ascending order:-

7.80, 7.75, 6.25, 6.40

6.25, 6.40, 7.75, 7.80

Math

4)

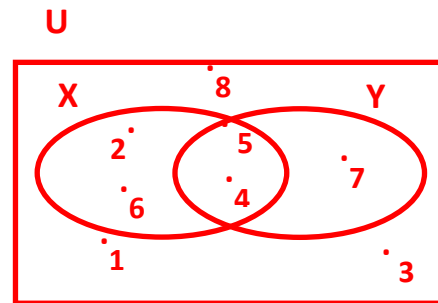
a)

1) $X \cap Y = \{4, 5\}$

2) $X \cup Y = \{2, 4, 5, 6, 7\}$

3) $X - Y = \{2, 6\}$

4) $\bar{X} = \{1, 3, 7, 8\}$



b)

1) \in

2) \subset

3) \subset

5)

a), $(\angle B) = 90^\circ$

b) Complete:-

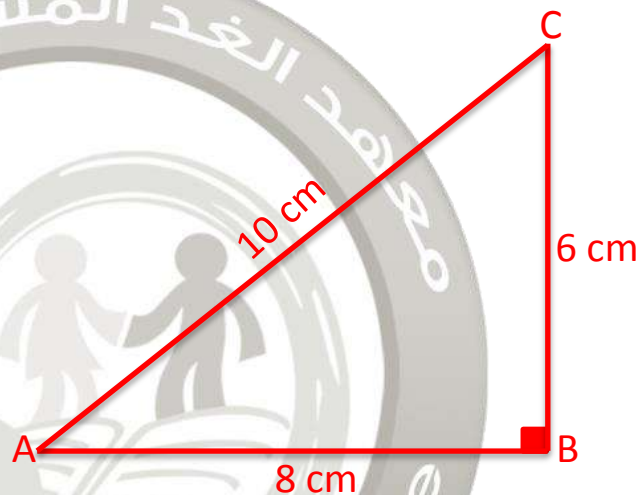
1) 0

2) 2

3)

a) $\frac{3 \div 3}{6 \div 3} = \frac{1}{2}$

b) $\frac{2 \div 2}{6 \div 2} = \frac{1}{3}$



Math

Model Exam (5)

1) Complete:-

- a) \subset
- b) Impossible
- c) $\frac{2 \div 2}{6 \div 2} = \frac{1}{3}$
- d) The vertex of the right angle.

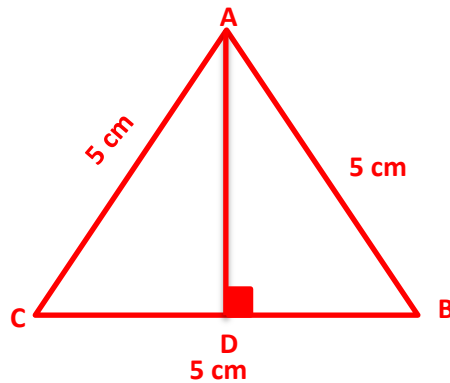
2) Choose:-

- a) 0.1
 - b) $\frac{7^1}{2} \times \frac{12}{7_1} = \frac{12}{2} = 6$
 - c) \notin
 - d) a diameter.
- 3)
- a) 14.250, 15.025, 14.375, 14.125
14.125, 14.250, 14.375, 15.025
 - b)
- 1) $\dot{X} = \{3, 5, 7\}$
 - 2) $X \cup y = \{1, 2, 4, 5, 7\}$
 - 3) $X \cap y = \{2\}$
 - 4) $Y - X = \{5, 7\}$

4)

Math

a)



b) Area of square = $S \times S$

$$= 5.02 \times 5.02$$

$$= 25.2004 \text{ m}^2$$

$$25.2004 \approx 25.2 \text{ m}^2$$

5)

a) The price = $2.5 \times 25 = 62.5$ pounds

b)

$$1) \text{ Not white} = \frac{15 \div 5}{20 \div 5} = \frac{3}{4}$$

$$2) \text{ White or red} = \frac{14 \div 2}{20 \div 2} = \frac{7}{10}$$

Good Luck