Test: $\quad$ Primary 6 Math (Term 4) - Catholic High (Y0)
Points: 55 points
Name:
Score: $\qquad$
Date: $\qquad$
Signature: $\qquad$

Select multiple choice answers with a cross or tick:Only select one answerCan select multiple answers

In 54.32 , what does the digit 3 stand for?A) 3 onesB) 3 tensC) 3 tenthsD) 3 hundredths

## What is the length of the paper clip?

A) $4.4 . \mathrm{cm}$B) $4.5 . \mathrm{cm}$C) $5.5 . \mathrm{cm}$D) $7.5 . \mathrm{cm}$

Which of the following is the likely mass of a handheld mobile phone?
A) 20 gB) 2 gC) 200 gD) 2000 g

Suresh paid $\$ 15$ for 30 cookies. How much did each cookie cost?A) 5 centB) 2 centC) 20 centD) 50 cent

Mr Ong arranges 18 blue chairs and 24 green chairs in rows. Each row has an equal number of chairs of the same colour. What is the greatest number of chairs that Mr Ong arrange in each row?A) 6B) 7C) 3D) 14

## What is the price of a laptop after adding 7\% GST?

A) $\$ 1395$B) $\$ 1493$C) $\$ 1507$D) $\$ 1605$

A group of pupils ran in a race. The table shows the number of pupils with the following times clocked in the race.

| Time clocked (s) | 150 | 151 | 153 | 155 | 157 | 158 | 160 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of pupils | 2 | 3 | 2 | 7 | 3 | 2 | 2 |

Prizes were given to the top 7 pupils. Bryan won a prize. What was the slowest time he could have clocked?A) 150 sB) 153 sC) 155 sD) 157 s
$\frac{3}{10}$ of the seats in an aeroplane are business class seats while the rest are economy class seats. $\frac{3}{5}$ of the economy class seats are occupied. What fraction of all the seats in the aeroplane are unoccupied economy class seats?
A)
$\frac{2}{5} \times \frac{7}{10}$

B

$$
\frac{2}{5} \times \frac{3}{10}
$$C)

$$
\frac{3}{5} \times \frac{3}{10}
$$D)

$$
\frac{3}{5} \times \frac{7}{10}
$$

## In the figure, AB and CD are straight lines. Find $\angle \mathrm{k}$.

A) 16B) 26C) 41D) 49

A tank was filled with $65 \ell$ of water at 0800 . Water flowed out of the tank from 0800 to 1200 . The line graph shows the volume of water in the tank from 0800 to 1200 .


During which one-hour period was the decrease in volume of water the greatest?A) Between 0800 and 0900B) Between 0900 and 1000C) Between 1000 and 1100D) Between 1100 and 1200

Arrange these distances from the shortest to the longest. | 4.23 km | $4 \frac{1}{5} \mathrm{~km}$ | $4 \mathrm{~km} \mathrm{25m}$ |
| :--- | :--- | :--- |

A)

| Shortest |  |
| :--- | :--- |
| 4.23 km | $\quad 4 \frac{1}{5} \mathrm{~km} \quad, \quad \underline{\text { Longest }}$ |
| $4 \mathrm{~km} \mathrm{25m}$ |  |

B)
$4 \mathrm{~km} 25 \mathrm{~m}, \quad 4 \frac{1}{5} \mathrm{~km} \quad, \quad 4.23 \mathrm{~km}$
(c)

$$
4 \frac{1}{5} \mathrm{~km} \quad, \quad 4 \mathrm{~km} \mathrm{25} \mathrm{~m} \quad, \quad 4.23 \mathrm{~km}
$$

(D)
$4 \frac{1}{5} \mathrm{~km} \quad, \quad 4.23 \mathrm{~km} \quad, \quad 4 \mathrm{~km} \mathrm{25m}$

Lin, Mat and Ned went for a run of different distances L, M and $N$ respectively. During the run, they covered an equal distance before they stopped for a water break. At that time, Lin had completed $\frac{1}{2}$ of distance L, Mat had completed $\frac{2}{3}$ of distance M and $N$ ed had completed $\frac{3}{5}$ of distance N . What is the ratio of the distance $L$ to distance $M$ to distance $N$ ?A) $1: 2: 3$B) $2: 3: 5$C) $12: 9: 10$D) $15: 20: 18$

Two figures S and T are shown in the square grid below.


Which of the following statement(s) is/are true?
A. $\angle \mathrm{x}+\angle \mathrm{y}=90^{\circ}$
B. Figure $S$ has the same area as Figure $T$.
C. Figure S has the same perimeter as Figure T.A) B onlyB) C onlyC) A and B onlyD) A and C only

The figure is made up of a semicircle and a quarter circle of the same radius 4 cm . What is the perimeter of the shaded figure? Give your answer in terms of $\pi$.
A) $6 \pi \mathrm{~cm}$B) $12 \pi \mathrm{~cm}$C) $(6 \pi+8) \mathrm{cm}$D) $(6 \pi+12) \mathrm{cm}$

Mdm Loke made $\frac{5}{6} \ell$ of drink. She poured the drink into as many cups of $\frac{1}{3} \ell$ as possible and had some drink left. What was the volume of the drink left?
A)

$$
\frac{5}{12} \ell
$$B)

$$
\frac{1}{2} \ell
$$C)

$$
\frac{1}{3} \ell
$$D)

$$
\frac{1}{6} \ell
$$

Express $0.7 \%$ as a fraction

Find the value of $\frac{10 k}{4}-2 k+3$ when $k=10$.

Refer to the figure below to answer questions 19 and 20.


Name the two lines that are parallel to each other.
A) UPB) $P Q$C) $P R$D) $U S$E) UTF) $T S$G) $T R$H) $R Q$I) $T Q$J) SR

Name the two lines that are perpendicular to each otherA) UPB) $P Q$C) $P R$D) USE) UTF) TSG) $T R$H) TQI) $S R$J) $R Q$

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Draw an equilateral triangle with the same area and perimeter as Figure $Z$ in the box provided.


Please type "done" to proceed to the next question

There are 6 shaded squares in the figure. Shade 3 more squares to form a symmetric figure with $A B$ as the line of symmetry.


Please type "done" to proceed to the next question

James received a fixed amount of allowance from his parents each month. Every month, James spent some of his allowance and saved the rest of the allowance in his savings box.
The graph shows the amount of money he spent each month.

a) In which month did he save the most of his allowance in his savings box?A) JanB) FebC) MarD) April
b) In April, $\frac{3}{4}$ of the amount James spent was on food. How much did he spend on food?

In 1 minute, Machine A can pack 3 boxes of biscuits while Machine B can pack 4 boxes of biscuits. Both machines started packing at 12.50 pm. At what time will both machines pack 105 boxes of biscuits in total? Leave your answer in the 24 hour clock

Samantha wanted to fill 24 similar bottles completely with the drink she made but found that she needed an additional 3.1L of the drink. Instead, she filled 18 similar bottles and had 5.3L of the drink left. What was the capacity of one such bottle?

The table shows the charges for fishing rod rental at a fishing pond.

| FISHING ROD RENTAL |  |
| :--- | :---: |
| For the first hour | $\$ 8$ |
| For every additional $\frac{1}{2}$ hour | $\$ 3$ |

Tim has $\$ 32$ and wants to rent a fishing rod. What is the greatest number of hours Tim can rent the fishing rod for?

In the square grid below, $A B$ and $A D$ are two sides of a trapezium $A B C D$. $A B$ is parallel to $C D$ and the length of $C D$ is twice the length of $A B$. Complete the trapezium by drawing the other two sides.


Please type "done" to proceed to the next question

Luke needed some piece of tape, each of length 8 cm , to seal some boxes. He bought 3 rolls of tape measuring 100 cm each. What was the greatest number of 8 cm tapes that Luke could cut from the 3 rolls of tape?

John had $\$ 60$ more than Kurt at first. Kurt gave $\$ 12$ to John. John then had 3 times as much money as Kurt. How much money did Kurt have in the end?

Kevin cuts a square paper along the dotted lines as shown in Figure 1 to get 3 identical rectangular pieces of paper. Rectangle ABCD in Figure 2 is one such rectangular paper with a perimeter of 56 cm . What is the length of one side of the square paper in Figure 1?


Figure 1


Figure 2

The square grid shows the position of points $\mathrm{A}, \mathrm{B}, \mathrm{C}, \mathrm{D}, \mathrm{E}$ and F .

a) In which direction is point $A$ from point $C$ ?
b) Jamie stood at one of the points facing point B. After she turned 45 anti-clockwise, she faced point. Which point was Jamie at before she turned?
A) AB) $B$C) CD) DE) E

Penny had 16 twenty-cent coins and 20 fifty cent coins. Richard had as many coins as Penny but had $\$ 2.10$ less. How many twenty cent coins did Richard have?

In the figure, $A B C D$ is a rectangle. $B E F G$ is a square and $\angle A B G=26^{\circ}$. Find $\angle F B C$.


The length of pencil $B$ is $\frac{9}{10}$ the length of pencil $A$. Find the length of pencil A .


For a recycling project, Edmund collected 20 bottles and Fred collected $7 \mathrm{k}+8$ bottles. They collected 154 bottles altogether. What is the value of $k$ ?

The bar graph shows the amount of water consumed by a family from April to July.


## a) How many times was the amount of water consumed in April as

 compared to May?b) What was the percentage increase in the amount of water consumed by the family in July compared to June?

Ice-cream, tart and cake were available as dessert at a dinner. Each diner was asked to choose one dessert. The bar graph represents the diners' choices. The number of diners is not shown on the scale and the bar that shows the number of diners who chose tart has not been drawn.

[2]
a) What was the ratio of the number of diners who chose cake to the number of diners who chose ice-cream?

[2]
b) ' X ' was the average number of diners who chose a dessert at the dinner. Draw the bar to represent the number of diners who chose tart in the graph.

In the figure below, ABC is an equilateral triangle and CDE is a right-angled triangle. Point B of the equilateral triangle lies on the side $D E$ of the right-angled triangle. $\angle \mathrm{DEC}=32^{\circ}$ and $\angle \mathrm{ECA}=285^{\circ}$.

Find $\angle A B D$.


A rectangle is made up of four triangles A, B, C and D. The area of A to the area of the rectangle is $1: 5$ while the area of $D$ to the area of the rectangle is $1: 7$.


The area of $B$ is $140 \mathrm{~cm}^{2}$. What is the area of $C$ ?

## The solid below is made up of 6 identical cubes.

a) Draw the top view of the solid on the grid below.


Front View

## Top View



Please type "done" to proceed to the next question
b) Linus painted the whole solid including the base. The total area painted is 416 cm 2 . What is the length of one edge of each cube?

The graph shows the rental charges for a recreation room for the first 6 hours.

a) How much is the rental charge for the recreation room for the first hour?
b) How much is the rental charge for every hour after the first 2 hours of use?

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c) The rate for rental charge remains the same after the 6th hour. How much is the rental charge for 7 hours?

In the figure below, ABF and AFG are isosceles triangles with $\mathrm{BA}=\mathrm{BF}$ and $\mathrm{GA}=\mathrm{GF}$ respectively. AF is parallel to $\mathrm{CE} . \angle \mathrm{DEF}$ is a right angle. $A B C$ is a straight line.

a) Find $\angle B C E$.

Statement : ABFG is a rhombusA) TrueB) FalseC) Not possible to tell
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Statement : ACEF is a parallelogramA) TrueB) FalseC) Not possible to tell

## Question 51 of 60

Eggs were only sold in trays of 30 eggs at a shop.


Mr Lee bought some such trays of eggs and re-packed them into carton boxes of 12 eggs as shown below. He needed 6 more eggs to have exact carton boxes of 12 eggs and 26 more carton boxes than trays.


How many eggs did Mr Lee buy from the shop?

Mr Ang paid $\$ 315$ for 21 chairs. Mr Ba paid the same amount but got 4 more chairs than Mr Ang because he used a membership coupon that gave him a discount for every 4 chairs purchased.
a)How much would Mr Bay had paid for the chairs without the use of the membership coupon?
b) With the use of the membership coupon, how much was the discount for every 4 chairs purchased?

The figure is made of 4 identical quarter circles with 2 quarter circles overlapping to form a rectangle.

a) What is the radius of each quarter circle?
b) Find the area of the figure. Take $\pi=3.14$

Mabel used white dots, grey dots and sticks to form figures that follow a pattern. The first four figures of the pattern are shown below.


The table below shows the number of white dots, black dots and sticks used for each figure.

| Figure Number | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Number of white dots | 0 | 1 | 4 | 9 |  |
| Number of grey dots | 1 | 3 | 5 | 7 |  |
| Number of sticks | 4 | 12 | 24 | 40 | 60 |

a) Fill in the table for Figure 5.
b) How many white dots are there in figure 50 ?
c) What is the total number of sticks in figure 50 ?

Axel and Brady had some identical large cubes and some identical small cubes. Each of them had a rectangular box of the same base but different height. They packed their cubes into their own box with cubes of the same size stacked on top of each other.

The figure below shows the first layer of cubes packed in each box.

a) Axel's box was packed tightly to the brim without any gaps. There were 50 more small cubes than large cubes. How many cubes were packed into the box altogether?
b) In Brady's box, the space occupied by all the large cubes and that of the small cubes was the same. What fraction of the cubes was the small cubes?

