

METHODIST GIRLS' SCHOOL (PRIMARY)

Founded in 1887



MID-YEAR EXAMINATION 2019
PRIMARY 6
MATHEMATICS

PAPER 1
BOOKLET A

Questions 1 to 10 carry 1 mark each. Questions 11 to 15 carry 2 marks each.
For each question, four options are given. One of them is the correct answer.
Make your choice (1, 2, 3 or 4). Shade the correct oval (1, 2, 3 or 4) on the
Optical Answer Sheet. (20 marks)

1 Express $37 + 12n - 2n + 7n$ in the simplest form.

- | | | |
|-----|------------------------------|---|
| (1) | $37 + 3n$ | |
| (2) | <u>$37 + 17n$</u> | $37+12n-2n+7n$
$=37+10n+7n$
$=\underline{37+17n}$ |
| (3) | $49 - 9n$ | |
| (4) | $49 + 5n$ | |

2

$$0.15 \times \square + 4 = 154$$

$$0.15 \times \square + 4 - 4 = 154 - 4$$

What is the missing number in the box?

- (1) 1
- (2) 10
- (3) 100
- (4) 1000

$$0.15 \times \square = 150$$

$$\square = \frac{150}{0.15} = 1000$$

Download Chat Online Marketplace (App/playstores) for Past Videos

To join future Free Tution Class, whatsapp to +6597291151

The solution is contributed by Dr Kirel (91123101) – For further enquiries

- 3 The ratio of Hassan's age to Meng Li's age is 3 : 8. What fraction of their total age is Meng Li's age?

(1) $\frac{3}{11}$

(2) $\frac{3}{8}$

(3) $\frac{8}{11}$

(4) $\frac{8}{3}$

H : M : Total

3 : 8 : 11

$$\frac{M}{\text{Total}} = \frac{8}{11}$$

Download and share marketplace (app/playstore) for fast videos

To join future Free Tutition Class, whatsapp to +6597291151

The solution is contributed by Dr Kirel (91123101) – For further enquiries

- 4 Express $\frac{2}{7}$ as a decimal corrected to 2 decimal places.

(1) 0.27

(2) 0.28

(3) 0.29

(4) 0.30

$$\begin{array}{r} 0.285 \\ 7 \overline{) 2.000} \\ \underline{14} \\ 60 \\ \underline{56} \\ 40 \\ \underline{35} \\ 50 \end{array} = 0.29 \text{ (2 d.p.)}$$

- 5 There are 70 fruits in a box, 56 are apples and the rest are pears.
What is the ratio of the number of pears to the number of apples?

(1) 1 : 4

(2) 1 : 5

(3) 4 : 1

(4) 4 : 5

$$\begin{array}{lcl} P & : & A \\ 14 & : & 56 \\ 2 & : & 8 \\ 1 & : & 4 \end{array}$$

$$70 - 56 = 14$$

Download Chat Online Marketplace (App/playstores) for Past Videos

To join future Free Tution Class, whatsapp to +6597291151

The solution is contributed by Dr Kirel (91123101) – For further enquiries

- 6 A box contains 200 blue, red and yellow marbles. There are 65 blue marbles, 45 red marbles and the rest are yellow. What percentage of the total number of marbles is yellow?

$$\rightarrow 200 - 65 - 45 = 90 \text{ yellow}$$

- (1) 45%
- (2) 50%
- (3) 55%
- (4) 90%

$$\begin{aligned} \% \text{ yellow} &= \frac{90}{200} \times 100\% \\ &= 45\% \end{aligned}$$

Download Chat Online Marketplace (App/playstores) for Past Videos

To join future Free Tution Class, whatsapp to +6597291151

The solution is contributed by Dr Kirel (91123101) – For further enquiries

- 7 Gayle has p stickers. Zahra has three times as many stickers as Gayle and Lee Qin has 4 stickers fewer than Gayle. How many stickers do they have altogether?

(1) $(4p + 4)$

(2) $(5p + 4)$

(3) $(5p - 4)$

(4) $(7p - 4)$

$$G = p$$

$$Z = 3p$$

$$LQ = p - 4$$

$$\text{sum: } p + 3p + (p - 4) = 5p - 4$$

Download Chat Online Marketplace (App/playstores) for Past Videos

To join future Free Tution Class, whatsapp to +6597291151

The solution is contributed by Dr Kirel (91123101) – For further enquiries

8 Which one of the following shapes does not have both of the properties below?

- (a) Diagonally opposite angles are equal.
- (b) Angles between parallel lines are equal.

(1) Rhombus



(2) Rectangle



(3) Trapezium



(4) Parallelogram



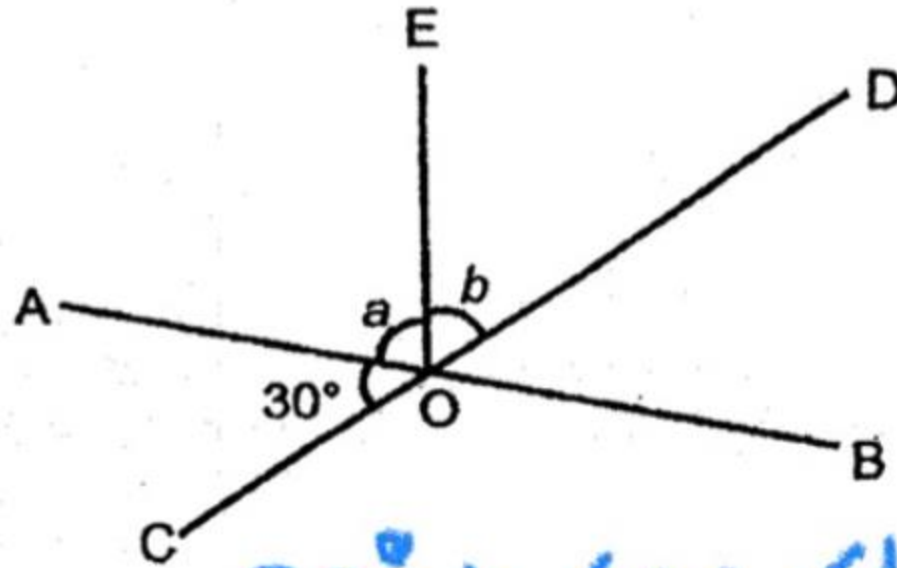
Download Chat Online Marketplace (App/playstores) for Past Videos

To join future Free Tution Class, whatsapp to +6597291151

The solution is contributed by Dr Kirel (91123101) – For further enquiries

9

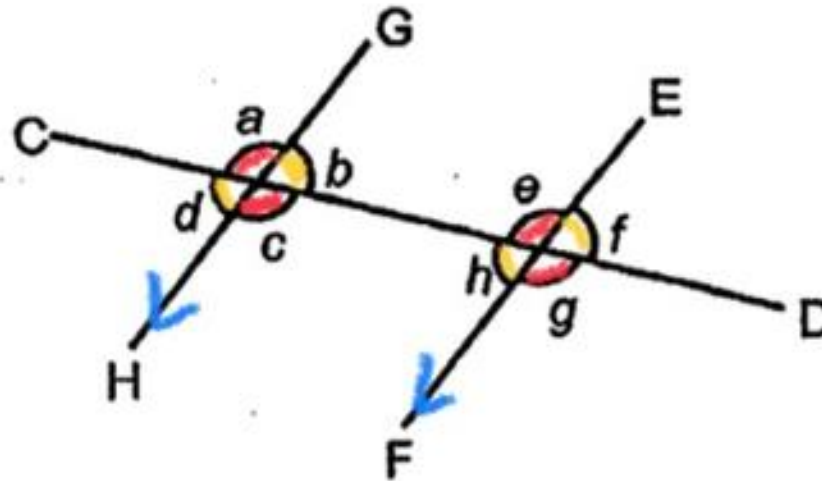
In the figure, AB, CD and OE are straight lines. $\angle a = \angle b$. Find $\angle a$.



- (1) 30°
- (2) 60°
- (3) 75°
- (4) 150°

$$\begin{aligned} 30^\circ + \angle a + \angle b &= 180^\circ \\ 30^\circ - 30^\circ + \angle a + \angle a &= 180^\circ - 30^\circ \\ 2(\angle a) &= 150^\circ \\ \angle a &= \frac{150^\circ}{2} = 75^\circ \end{aligned}$$

- 10 In the figure below, CD, EF and GH are straight lines. EF and GH are parallel to each other.



Which one of the following statements is true?

- (1) $\angle d = \angle e$ ✗
- (2) $\angle c = \angle g$ ✓
- (3) $\angle a = \angle f$ ✗
- (4) $\angle b = \angle e$ ✗

Download Chat Online Marketplace (App/playstores) for Past Videos

To join future Free Tution Class, whatsapp to +6597291151

The solution is contributed by Dr Kirel (91123101) – For further enquiries

11 Find the value of $\frac{3}{10} + \frac{2}{5} = \frac{3}{\cancel{10}_2} \times \frac{\cancel{5}^1}{2}$

~~(1)~~ $\frac{3}{4}$

(2) $\frac{4}{3}$

(3) $\frac{3}{25}$

(4) $\frac{25}{3}$

$= \frac{3}{4}$

Download Chat Online Marketplace (App/playstores) for Past Videos

To join future Free Tution Class, whatsapp to +6597291151

The solution is contributed by Dr Kirel (91123101) – For further enquiries

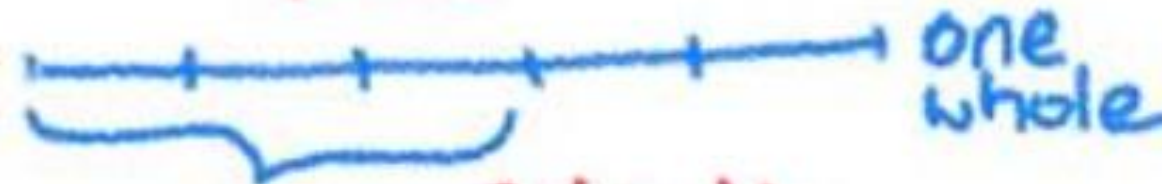
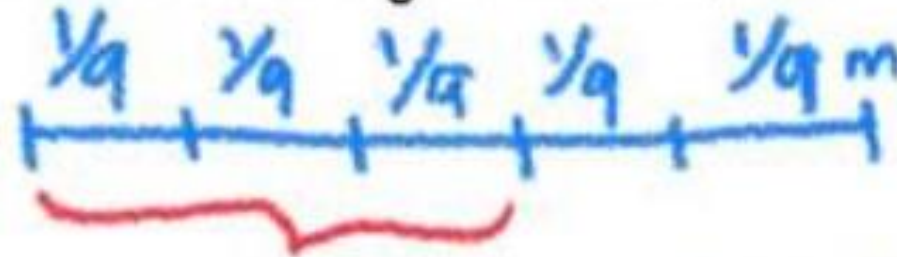
- 12 Mother had $\frac{5}{9}$ m of ribbon. She used $\frac{3}{5}$ of it to tie a present. How much ribbon had she left?

(1) $\frac{1}{2}$ m

☒ (2) $\frac{1}{3}$ m

(3) $\frac{2}{45}$ m

(4) $\frac{2}{9}$ m



$$\frac{3}{5} = \frac{3}{5} \times \frac{1}{1} = \frac{3}{5} \times \frac{1}{3} = \frac{1}{3}$$

$$\text{or } \frac{3}{5} \times \frac{5}{3} = \frac{3}{3} = 1$$

Download Chat Online Marketplace (App/playstores) for Past Videos

To join future Free Tution Class, whatsapp to +6597291151

The solution is contributed by Dr Kirel (91123101) – For further enquiries

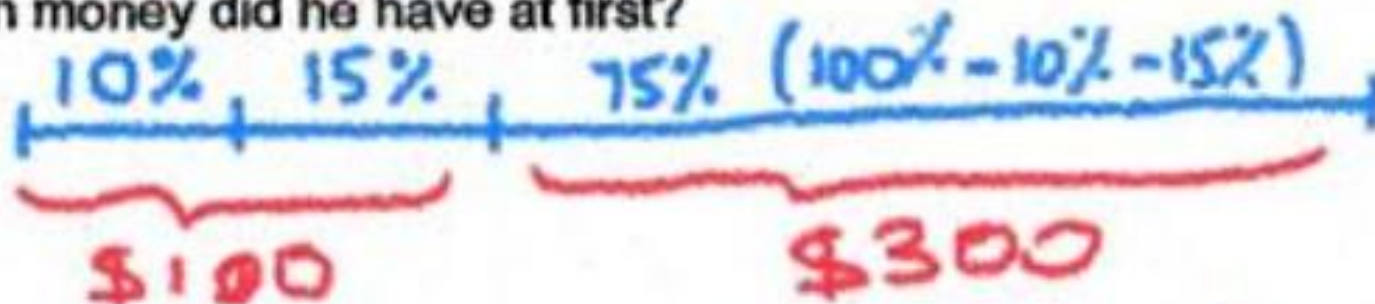
- 13 Mr Tan spent 10% of his money on food and 15% on transport. He then had \$300 left. How much money did he have at first?

(1) \$100

(2) \$200

(3) \$400

(4) \$900



At first, he has $100\% = 75\% + 25\%$
 $= 300 + 100$
 $= 400$

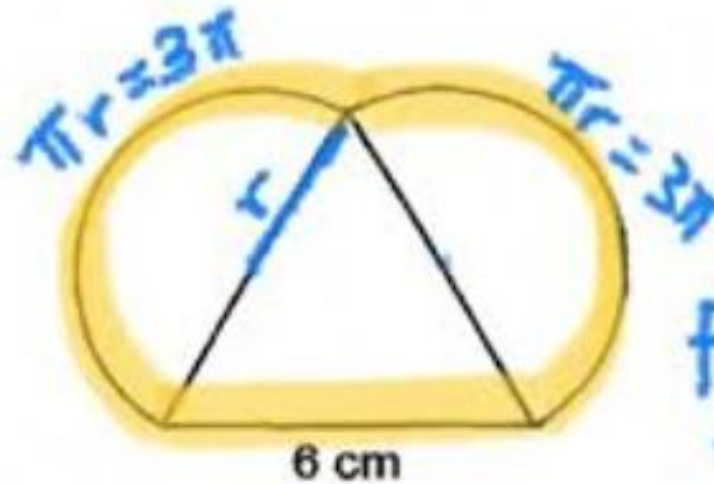
Download Chat Online Marketplace (App/playstores) for Past Videos

To join future Free Tution Class, whatsapp to +6597291151

The solution is contributed by Dr Kirel (91123101) – For further enquiries

- 14 The figure is formed by an equilateral triangle and 2 semicircles of diameter 6 cm. Find the perimeter of the figure. Leave your answer in terms of π .

- ~~(1)~~ $(6\pi + 6)$ cm
(2) $(6\pi + 18)$ cm
(3) $(9\pi + 6)$ cm
(4) $(12\pi + 18)$ cm



$$2r = d = 6 \text{ cm}$$
$$r = 3 \text{ cm}$$

$$\begin{aligned} \text{perimeter} &= 3\pi + 3\pi + 6 \\ &= 6\pi + 6 \end{aligned}$$

Download Chat Online Marketplace (App/playstores) for Past Videos

To join future Free Tution Class, whatsapp to +6597291151

The solution is contributed by Dr Kirel (91123101) – For further enquiries

- 15 The figure is a semicircle of diameter 14 cm. What is the area of the figure?

Take $\pi = \frac{22}{7}$

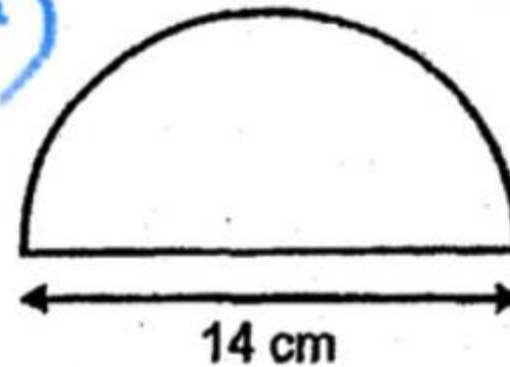
(1) 22 cm²

(2) 44 cm²

☒ (3) 77 cm²

(4) 154 cm²

$$\begin{aligned} r &= 7 \text{ cm} \\ \text{Area} &= \frac{1}{2}(\pi r^2) \\ &= \frac{1}{2}\left(\frac{22}{7} \times 7 \times 7\right) \\ &= 11 \times 7 \\ &= 77 \text{ cm}^2 \end{aligned}$$



$$\begin{aligned} \text{Area of circle} \\ &= \pi r^2 \end{aligned}$$

Download Chat Online Marketplace (App/playstores) for Past Videos

To join future Free Tution Class, whatsapp to +6597291151

The solution is contributed by Dr Kirel (91123101) – For further enquiries

19 Express 0.9% as a fraction.

$$= \frac{0.9}{100.0} = \frac{9}{1000}$$

Ans: $\frac{9}{1000}$

Download Chat Online Marketplace (App/playstores) for Past Videos

To join future Free Tution Class, whatsapp to +6597291151

The solution is contributed by Dr Kirel (91123101) – For further enquiries

- 20 Mr Wong has a 10-m long string. He cuts the string into shorter lengths of $\frac{5}{6}$ m each. How many such shorter pieces of string will he get?



$$\begin{aligned}\text{No. pieces} &= 10 \div \frac{5}{6} \\ &= \cancel{20} \times \frac{6}{\cancel{5}} \\ &= 2 \times 6 \\ &= 12\end{aligned}$$

Download Chat Online Marketplace (App/playstores) for Past Videos

To join future Free Tution Class, whatsapp to +6597291151

The solution is contributed by Dr Kirel (91123101) – For further enquiries

21



Download Chat Online Marketplace (App/playstores) for Past Videos

To join future Free Tution Class, whatsapp to +6597291151

The solution is contributed by Dr Kirel (91123101) – For further enquiries

22 Figure A is made up of 2 identical quadrants.

Both Figure A and Figure B have the same diameter of 20 cm.

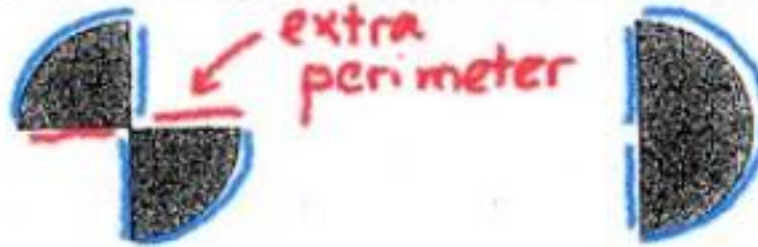


Figure A

Figure B

Each statement below is either true, false, or not possible to tell from the information given. For each statement, put a tick (✓) in the correct column.

Statement	True	False	Not possible to tell
Both Figure A and Figure B have the same perimeter.		✓	
Both Figure A and Figure B have the same area.	✓		

Download Chat Online Marketplace (App/playstores) for Past Videos

To join future Free Tution Class, whatsapp to +6597291151

The solution is contributed by Dr Kirel (91123101) – For further enquiries

23 In the figure below, ABCD is a square. Find $\angle ADE$.

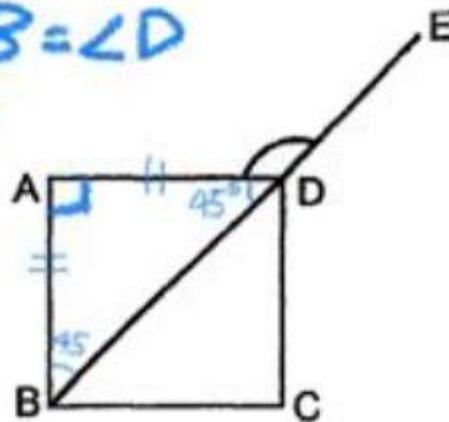
$\triangle ABD$ is isos $\Rightarrow \angle B = \angle D$

$$\angle A + \angle B + \angle D = 180^\circ$$

$$90^\circ + \angle D + \angle D = 180^\circ$$

$$\therefore \angle D = 45^\circ$$

$$\begin{aligned}\angle ADE &= 180^\circ - 45^\circ \\ &= 135^\circ\end{aligned}$$



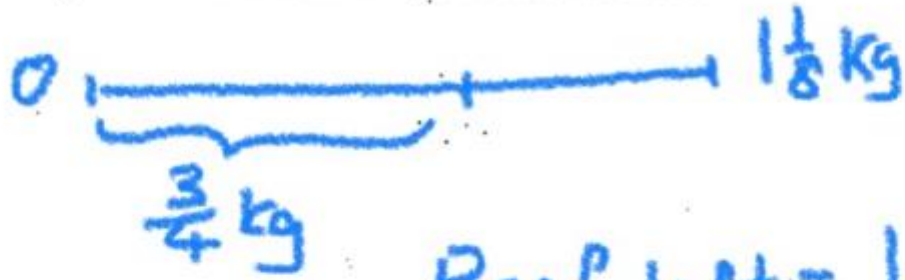
Ans: 135°

Download Chat Online Marketplace (App/playstores) for Past Videos

To join future Free Tution Class, whatsapp to +6597291151

The solution is contributed by Dr Kirel (91123101) – For further enquiries

- 24 James bought $1\frac{1}{8}$ kg of beef. He used $\frac{3}{4}$ kg of it to make some beef patties. How much beef had he left?



$$\begin{aligned}\text{Beef left} &= 1\frac{1}{8} - \frac{3}{4} \\ &= \frac{9}{8} - \frac{6}{8} \\ &= \frac{3}{8}\end{aligned}$$

Ans: $\frac{3}{8}$ kg

Download Chat Online Marketplace (App/playstores) for Past Videos

To join future Free Tution Class, whatsapp to +6597291151

The solution is contributed by Dr Kirel (91123101) – For further enquiries

25 What fraction of the figure is shaded?

Area of rectangle

$$= 4 \times 3 \\ = 12 \text{ cm}^2$$

Area A_1

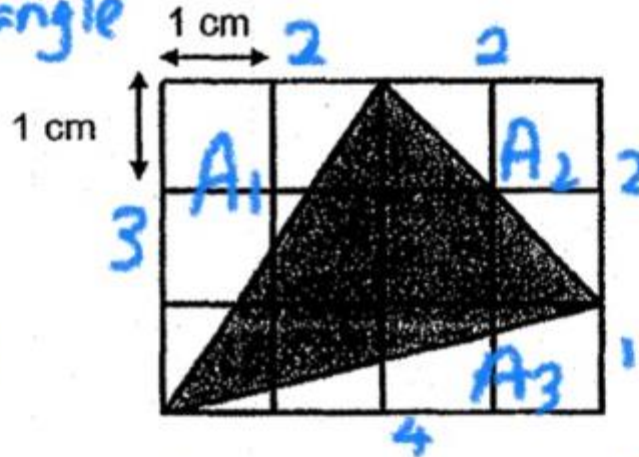
$$= \frac{1}{2} \times 2 \times 3 \\ = 3 \text{ cm}^2$$

Area A_2

$$= \frac{1}{2} \times 2 \times 2 \\ = 2 \text{ cm}^2$$

Area A_3

$$= \frac{1}{2} \times 4 \times 1 = 2 \text{ cm}^2$$



$$\begin{aligned} \text{Area shaded} &= \text{rect} - A_1 - A_2 - A_3 \\ &= 12 - 3 - 2 - 2 \\ &= 5 \text{ cm}^2 \end{aligned}$$

Ans: 5 cm²

Download Chat Online Marketplace (App/playstores) for Past Videos

To join future Free Tution Class, whatsapp to +6597291151

The solution is contributed by Dr Kirel (91123101) – For further enquiries

- 26 There were 50 children at a party. Each child received a packet of sweets which had a mass of 0.15 kg. What was the total mass of the sweets that was given out?

$$\begin{aligned}\text{Total mass} &= 50 \times 0.15 \text{ kg} \\ &= 7.5 \text{ kg} \\ &= 7500 \text{ g}\end{aligned}$$

Ans: 7500 g

Download Chat Online Marketplace (App/playstores) for Past Videos
To join future Free Tution Class, whatsapp to +6597291151
The solution is contributed by Dr Kirel (91123101) – For further enquiries

- 27 Mr Tan bought $7d$ pencils. He gave 3 pencils to each of his pupils and had $2d$ pencils left. Express the number of pupils Mr Tan had in terms of d .



$$\text{Total pencils given to pupils} = 7d - 2d = 5d$$

$$\text{No. of pupils} = \frac{5d}{3}$$

Ans: $\frac{5d}{3}$

Download Chat Online Marketplace (App/playstores) for Past Videos

To join future Free Tution Class, whatsapp to +6597291151

The solution is contributed by Dr Kirel (91123101) – For further enquiries

28 In the diagram below, ABE is an equilateral triangle. BC is parallel to AD and DC is perpendicular to BC. Find $\angle FBC$.

$\triangle ABE$ is eqn. \triangle

$$\therefore \angle A = \angle B = \angle C = 60^\circ$$

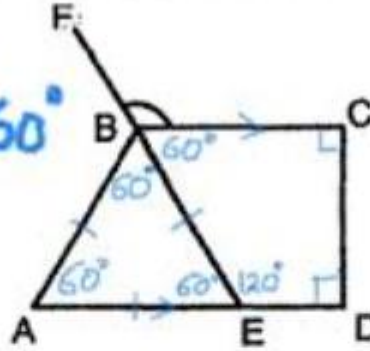
$$\angle CBE = \angle AEB$$

(alt. \angle s)

$$\angle FBC + \angle CDE = 180^\circ$$

$$\angle FBC + 60^\circ = 180^\circ$$

$$\angle FBC = 180^\circ - 60^\circ = 120^\circ$$



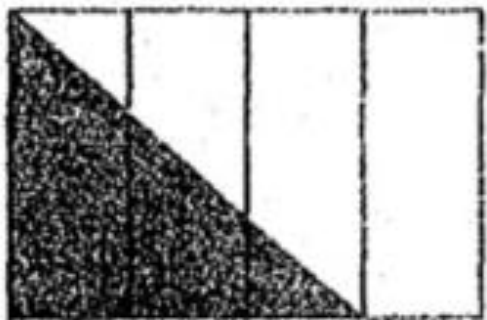
Ans: 120

Download Chat Online Marketplace (App/playstores) for Past Videos

To join future Free Tution Class, whatsapp to +6597291151

The solution is contributed by Dr Kirel (91123101) – For further enquiries

- 29 The figure is made up of 4 identical rectangles. What is the ratio of the shaded area to the total area of 4 identical rectangles?



$$\text{Shaded area} = \frac{1}{2} (3 \text{ rect}) = \frac{3}{2}$$

$$\text{Total area} = 4 \text{ rect} = \frac{8}{2}$$

$$\text{ratio is } \frac{3}{2} : \frac{8}{2} = 3:8$$

Ans: _____

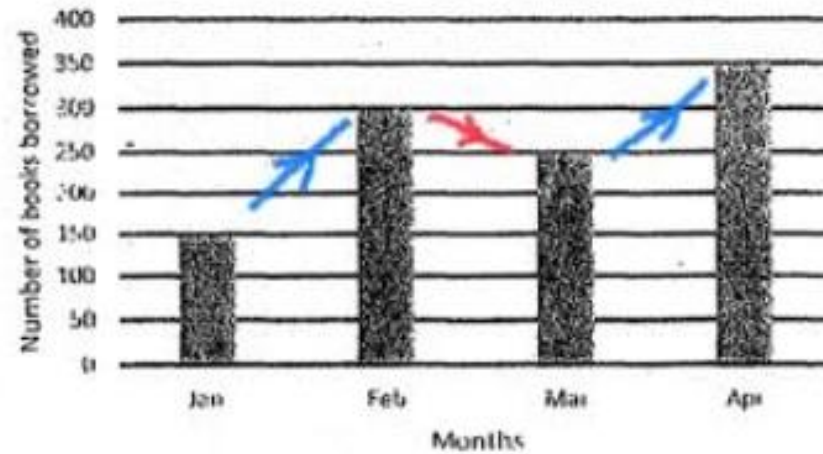
Download Chat Online Marketplace (App/playstores) for Past Videos

To join future Free Tution Class, whatsapp to +6597291151

The solution is contributed by Dr Kirel (91123101) – For further enquiries

30

The graph below shows the total number of books borrowed from January to April.



- (a) In which month was there a decrease in the number of books borrowed?
- (b) What was the percentage increase in the number of books borrowed in February compared to January?

Books in Jan = 150

Books in Feb = 300

$$\begin{aligned} \% \text{ increase} &= \frac{300 - 150}{150} \times 100\% \\ &= 100\% \end{aligned}$$

Ans: (a) March

(b) 100%

deos

quiries

METHODIST GIRLS' SCHOOL (PRIMARY)

Founded in 1887



MID-YEAR EXAMINATION 2019
PRIMARY 6
MATHEMATICS

PAPER 2

Download Chat Online Marketplace (App/playstores) for Past Videos

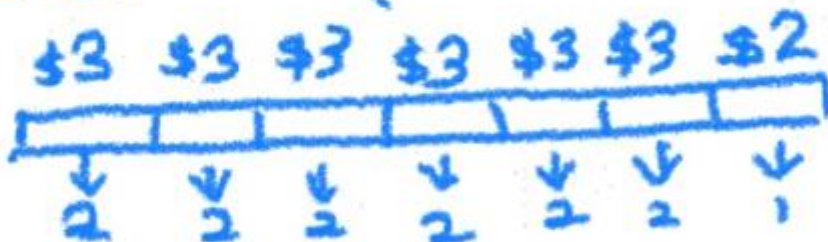
To join future Free Tution Class, whatsapp to +6597291151

The solution is contributed by Dr Kirel (91123101) – For further enquiries

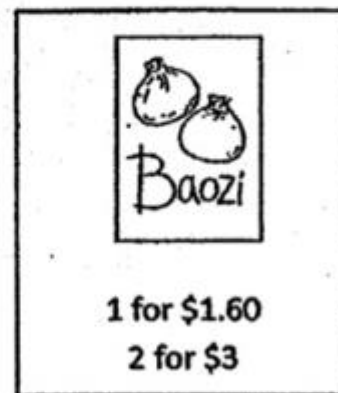
Questions 1 to 5 carry 2 marks each. Show your working clearly and write your answers in the spaces provided. For questions which require units, give your answers in the units stated. (10 marks)

- 1 Buns were sold at \$1.60 each or 2 for \$3. What was the greatest number of buns that Siti could buy with \$20?

$$\frac{\$20}{\$3} = 6 \text{ (remainder \$2)}$$

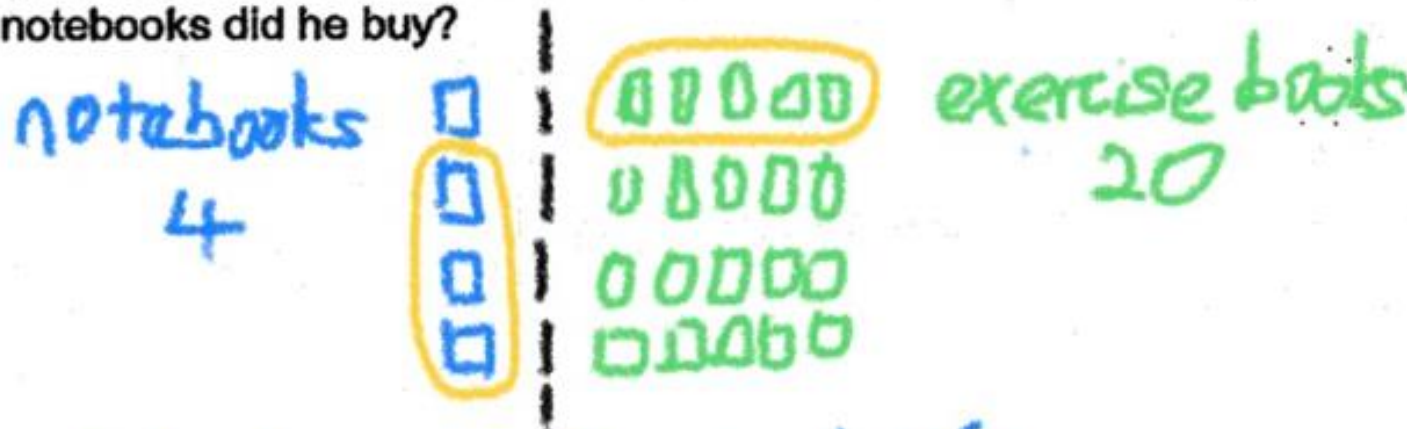


$$\begin{aligned} \text{No. of buns} &= 6 \times 2 + 1 \\ &= 13 \end{aligned}$$



Ans: 13

- 2 Ben had enough money to buy either 4 notebooks or 20 exercise books. He bought 5 exercise books and some note books. How many notebooks did he buy?



4 notebooks \leftrightarrow 20 ex. books
 \therefore 1 notebook \leftrightarrow 5 ex. books

Ben bought $4 - 1 = 3$ notebooks

Ans: 3

Download Chat Online Marketplace (App/playstores) for Past Videos

To join future Free Tution Class, whatsapp to +6597291151

The solution is contributed by Dr Kirel (91123101) – For further enquiries

3 Find the value of $6 + \frac{3n}{5}$ when $n = 7$.

Give your answer as a mixed number in the simplest form.

$$\begin{aligned} 6 + \frac{3 \times 7}{5} &= 6 + \frac{21}{5} \\ &= 6 + 4\frac{1}{5} \\ &= 10\frac{1}{5} \end{aligned}$$

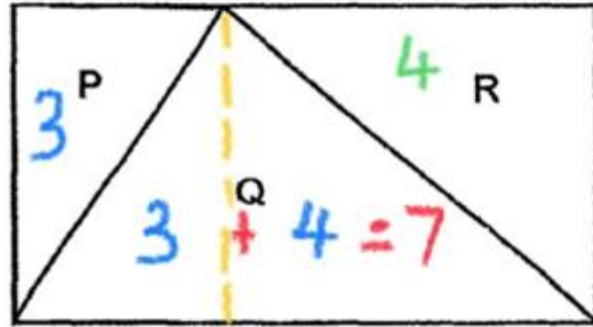
Ans: $10\frac{1}{5}$

Download Chat Online Marketplace (App/playstores) for Past Videos

To join future Free Tution Class, whatsapp to +6597291151

The solution is contributed by Dr Kirel (91123101) – For further enquiries

- 4 The figure below is a rectangle. The ratio of the area P to the area of Q is 3 : 7. What is the ratio of the area of Q to the area of R?



Split Q by yellow line

$$\text{Area of } Q = P + R$$
$$7 = 3 + 4$$

Ratio Q : R

$$7 : 4$$

Ans: 7 : 4

Download Chat Online Marketplace (App/playstores) for Past Videos

To join future Free Tution Class, whatsapp to +6597291151

The solution is contributed by Dr Kirel (91123101) – For further enquiries

- 5 May bought 160 red and blue buttons. 25% of the buttons bought were red. May used 75% of the blue buttons for art work. How many blue buttons did May use?



$$25\% = \frac{25}{100} \times 160$$
$$= 40$$

$$75\% = \frac{75}{100} \times 160$$
$$= 120$$

$$75\% \text{ of blue buttons} = \frac{75}{100} \times 120$$
$$= 90$$

Down

The sol

Ans:

90

os

iries

- 6 The figure shows a square of side 10 cm, a semicircle and a quadrant of radius 5 cm. Find the perimeter of the shaded part. Take $\pi = 3.14$.

Perimeter circle $= 2\pi r = 31.4$

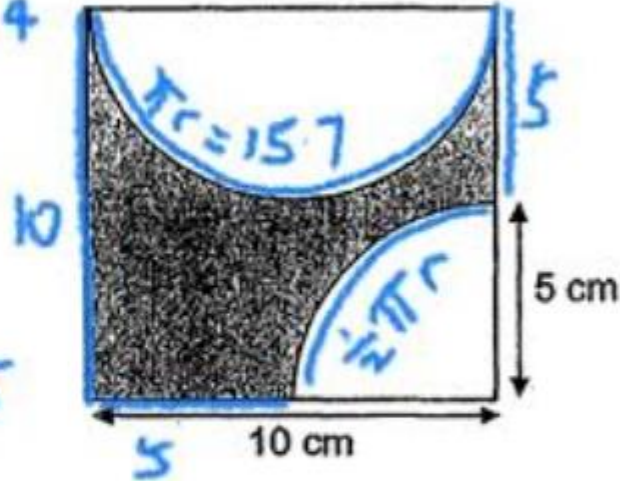
" Semicircle $= \pi r = 15.7$

" quadrant $= \frac{1}{2}\pi r = 7.85$

Perimeter shaded part

$$= 10 + 15.7 + 5 + 7.85 + 5$$

$$= 43.55 \text{ cm}$$



Ans: 43.55 [3]

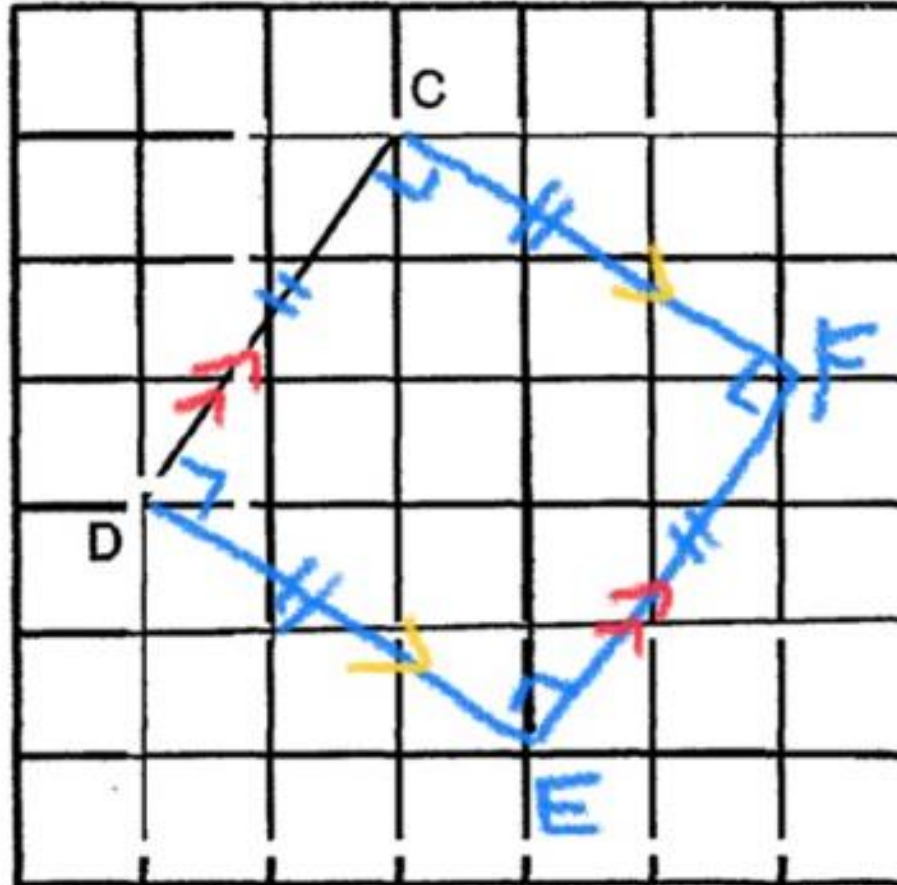
Download Chat Online Marketplace (App/playstores) for Past Videos

To join future Free Tution Class, whatsapp to +6597291151

The solution is contributed by Dr Kirel (91123101) – For further enquiries

7

The grid below shows a straight line, CD. Draw 3 more lines to form a square CDEF. Label your diagram clearly. [3]

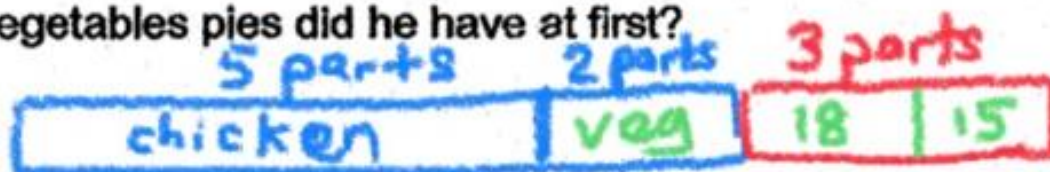


Download Chat Online Marketplace (App/playstores) for Past Videos

To join future Free Tution Class, whatsapp to +6597291151

The solution is contributed by Dr Kirel (91123101) – For further enquiries

- 8 Gavin had some chicken pies and vegetable pies in the ratio of 5 : 2. He sold 18 chicken pies and made 15 more vegetable pies. In the end, he has equal number of chicken pies and vegetable pies. How many vegetable pies did he have at first?



For equal no., find out how many veg pies to add to make up the 3 parts

If 18 chicken pies not sold, then have to add 18 veg pies, plus the 15 veg pies

$$\Rightarrow 3 \text{ parts} = 18 + 15 = 33$$

$$\therefore 1 \text{ part} = 33/3 = 11$$

$$\text{At first, } 2 \text{ parts veg pies} = 2 \times 11 = 22$$

Ans: 22 [3]

Download Chat Online Marketplace (App/playstores) for Past Videos

To join future Free Tution Class, whatsapp to +6597291151

The solution is contributed by Dr Kirel (91123101) – For further enquiries

- 9 Su Mei is k years older than her sister. The sum of their ages is 38 years.

(a) How old is Su Mei now? Express Su Mei's age in terms of k .

(b) If $k = 6$, how old will Su Mei be in 7 years' time?

$$\begin{array}{l} \text{a) Su Mei} \quad \boxed{} \boxed{k} \\ \text{Sister} \quad \boxed{} \end{array} \} = 38$$

$$\left(\begin{array}{l} \text{2 times} \\ \text{Su Mei's age} \end{array} \right): \begin{array}{l} \boxed{} \boxed{k} \\ \boxed{} \boxed{k} \end{array} = 38 + \boxed{k}$$

$$\text{Su Mei's age} \quad \boxed{} \boxed{k} = \frac{38+k}{2}$$

$$\text{b) } k=6, \text{ Su Mei's age} = \frac{38+6}{2} = 22$$

$$\begin{array}{l} \text{In 7 yr's time, Su Mei's age} \\ \text{is } 22+7=29 \end{array}$$

Ans: (a) $\frac{38+k}{2}$ [1]

(b) 29 [2]

Download Chat Online Marketplace (App/playstores) for Past Videos

To join future Free Tutition Class, whatsapp to +6597291151

The solution is contributed by Dr Kirel (91123101) – For further enquiries

10 The books in a library are packed equally into Box A and Box B.

The ratio of the number of fiction books to the number of non-fiction books in Box A is 2 : 1. The ratio of the number of fiction books to the number of non-fiction books in Box B is 4 : 11. What is the ratio of the total number of fiction books to the total number of non-fiction books in the library?

<u>Box A</u>		<u>Box B</u>
F : NF : Total		F : NF : Total
2 : 1 : 3		4 : 11 : 15
10 : 5 : 15	↘ make it the same ↗	

<u>Box A + Box B</u>		
F	NF	Total
10+4	5+11	15+15
14	16	30
7	8	15

Ratio F : NF is 7 : 8 //

- 11 Diana has 1625 ml of orange juice in a jug. She poured the juice into similar glasses, filling each glass with 250 ml of orange juice.

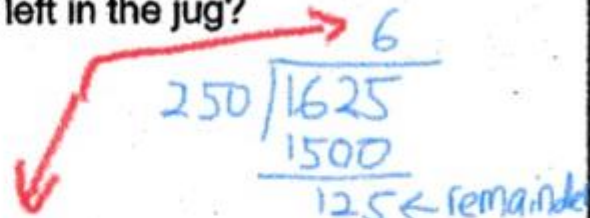
(a) What was the maximum number of such glasses Diana could fill?

(b) How much of the orange juice was left in the jug?
Give your answer in litres.

a) Max no. glasses filled
$$= \frac{1625}{250} = 6$$

$$6 \times 250 = 1500 \text{ mL}$$

b) Orange juice left = $1625 - 1500$
 $= 125 \text{ mL}$
 $= 0.125 \text{ L}$


$$\begin{array}{r} 250 \overline{) 1625} \\ \underline{1500} \\ 125 \leftarrow \text{remainder} \end{array}$$

Download Chat Online Marketplace (App/playstores) for Past Videos

To join future Free Tution Class, whatsapp to +6597291151

The solution is contributed by Dr Kirel (91123101) – For further enquiries

- 12 There were 350 goldfish and guppies in a shop. 20% of them were goldfish. After some goldfish were added, the percentage of goldfish increased to 30%. How many goldfish were added?

Handwritten solution:

Initial state:

gold fish	20%	80% guppies
70		$350 - 70 = 280$

After adding more goldfish:

gold fish	30%	70%
? : 70		280

Calculations:

$$20\% \text{ of } 350 = \frac{20}{100} \times 350$$

$$= 2 \times 35$$

$$= 70$$

$$80\% \text{ of } 350 = 350 - 70 = 280$$

After adding more goldfish,

gold fish $\rightarrow 30\%$

guppies $\rightarrow 70\% = 280$

$$1\% = \frac{280}{70}$$

$$= 4$$

gold fish $\rightarrow 30\% = 30 \times 4 = 120$

gold fish added $= 120 - 70 = 50$

Ans: 50 [4]

Do

The s

es) for Past Videos

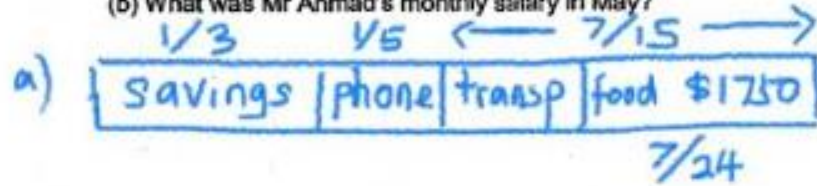
+6597291151

For further enquiries

- 13 In May, Mr Ahmad saved $\frac{1}{3}$ of his salary and used $\frac{1}{5}$ of his monthly salary to buy a mobile phone. He spent $\frac{3}{8}$ of the remainder on transport and the rest of the \$1750 was spent on food.

(a) What fraction of his monthly salary in May was spent on food?

(b) What was Mr Ahmad's monthly salary in May?



$$\text{Remainder} = 1 - \frac{1}{3} - \frac{1}{5} = \frac{15}{15} - \frac{5}{15} - \frac{3}{15} = \frac{7}{15}$$

$$\begin{aligned} \text{Food} &= \frac{5}{8} \text{ of remainder} \\ &= \frac{5}{8} \times \frac{7}{15} = \frac{7}{24} \end{aligned}$$

$$\text{b) Food is } \frac{7}{24} = \$1750$$

$$\frac{1}{24} = \frac{\$1750}{7} = \$250$$

$$\begin{aligned} \text{Salary is } 1 &= \frac{24}{24} = 24 \times \$250 \\ &= \$6000 \end{aligned}$$

Ans: (a) $\frac{7}{24}$ [2]

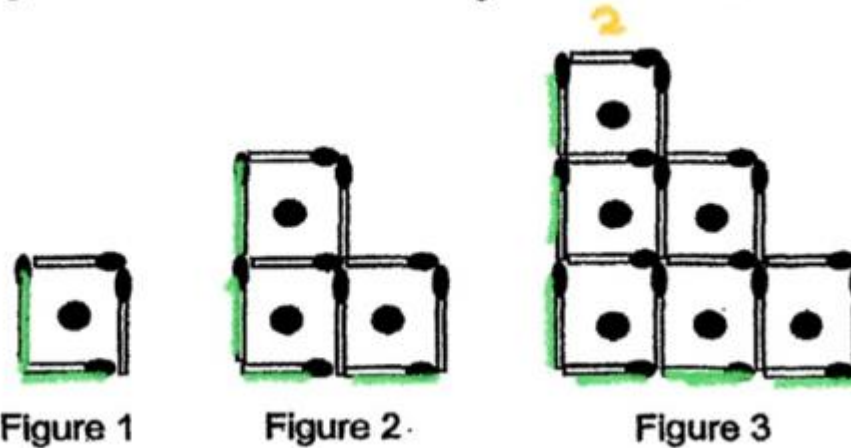
(b) \$6000 [2]

stores) for Past Videos

to +6597291151

– For further enquiries

14 The figures below are formed using similar matchsticks and dots.



(a) Complete the following table.

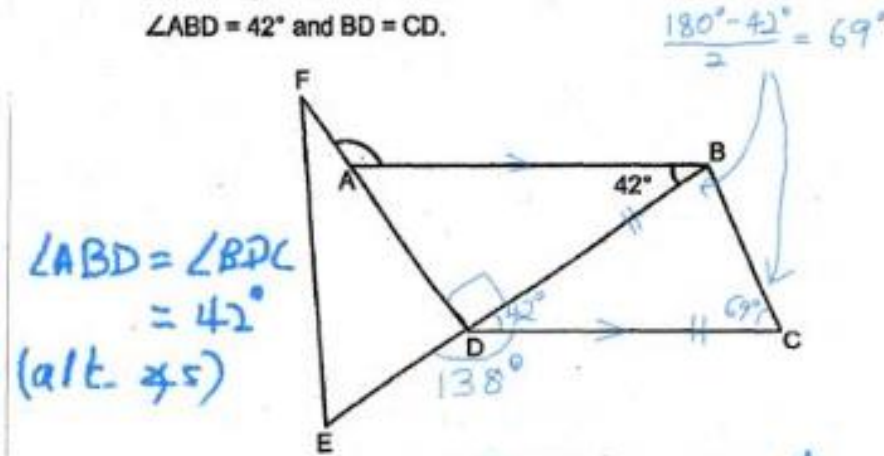
Figure Number	Number of dots	Number of matchsticks
1	1	$4 = 2(1) + 1(2)$
2	3	$10 = 2(2) + 2(3)$
3	6	$18 = 2(3) + 3(4)$
4	(i) 10 [1]	(ii) 28 [1]

Download Chat Online Marketplace (App/playstores) for Past Videos

To join future Free Tution Class, whatsapp to +6597291151

The solution is contributed by Dr Kirel (91123101) – For further enquiries

- 15 In the diagram below, EDB is a straight line and AB is parallel to DC.
 $\angle ABD = 42^\circ$ and $BD = CD$.



(a) Find $\angle DCB$.

(b) Find $\angle FAB$.

a) $\triangle BCD$ is isosceles \triangle
 $\angle DCB = \angle DBC$
 $\angle DCB + \angle DBC + \angle BDC = 180^\circ$
 $\angle DCB + \angle DCB + 42^\circ = 180^\circ$
 $\angle DCB = \frac{180^\circ - 42^\circ}{2}$
 $= 69^\circ$

b) $\angle BAD = 180^\circ - 90^\circ - 42^\circ$
 $= 48^\circ$
 $\angle FAB = 180^\circ - 48^\circ$
 $= 132^\circ$

Ans: (a) 69° [2]
 (b) 132° [2]

or Past Videos

07291151

for further enquiries

16 Mary has $\frac{4}{7}$ as many stickers as Sandy and $\frac{2}{5}$ as many stickers as Cindy.

Cindy has 15 more stickers than Sandy.

(a) What fraction of Cindy's stickers is Sandy's stickers?

(b) How many stickers do the 3 girls have altogether?

a)

Mary	Sandy	Cindy
4	7	
$2 \rightarrow 4$		$5 \rightarrow 10$
4	7	10

Cindy has 3 parts more than Sandy
 $\rightarrow 3 \text{ parts} = 15$
1 part = 5

Sandy has $\frac{7}{10}$ stickers as Cindy

b) Total = $4 + 7 + 10 = 21 \text{ parts}$
 $= 21 \times 5$
 $= 105$

Download Chat Online Marketplace (App/playstores) for Past Videos

To join future Free Tution Class, whatsapp to +6597291151

The solution is contributed by Dr Kirel (91123101) – For further enquiries



ABC Bubble Tea

\$4.50 per cup

For every 5 cups of bubble tea purchased,
a 20% discount will be given to the 5th cup.

Each cup of bubble tea cost \$4.50 before discount.

(a) How much did Mrs Yeo pay for 5 cups of bubble tea?

(b) Mrs Yeo paid \$151.20 for some cups of bubble tea.

How many cups of bubble tea did she buy?

$$a) 5^{th} \text{ cup cost } \frac{80}{100} \times \$4.50 = \$3.60$$

$$\rightarrow 5 \text{ cups cost } (4 \times \$4.50) + \$3.60 = \$21.60$$

$$b) \frac{151.20}{21.60} = 7 \text{ (sets of 5 cups)}$$

$$\rightarrow \text{Mrs Yeo bought } 7 \times 5 = 35 \text{ cups}$$

Download Chat Online Marketplace (App/playstores) for Past Videos

To join future Free Tution Class, whatsapp to +6597291151

The solution is contributed by Dr Kirel (91123101) – For further enquiries