Y3 Foundations SAMPLE Mathematics Questions

Addition and Subtraction of Decimals

Kyle has $8.50 and Kyrie has $10.25. They combined their money to buy a toy car for $13.99.

How much money do they have left?

A. $5.01

B. $4.76

C. $3.99

D. $6.26

Ans: B

Kyle = $8.50

Kyrie = $10.25

Total = 8.50 + 10.25 = $18.75
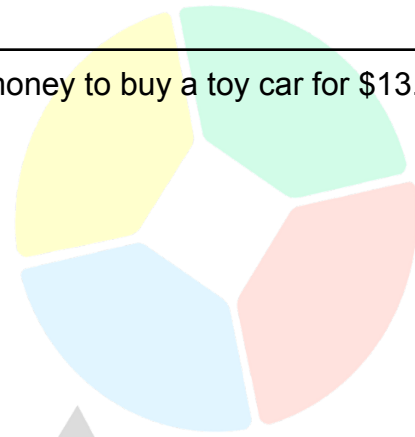
Toy car = $13.99

Money left = 18.75 - 13.99

= $4.76

Unit Conversion

Ruby found a small caterpillar in her garden last week. The caterpillar was only 35 millimetres long when Ruby found it. After just one week, the caterpillar grew 4 times as long.

How many centimetres long was the caterpillar after just one week?

A. 14 centimetres

B. 28 centimetres

C. 35 centimetres

D. 140 centimetres

E. 280 centimetres

Ans: A

Given:
found = 35 mm
1 week after = 4 (35) = 140 mm

Solution:
4(35) = 140 mm
140/10= 14 cm

Money Problems

Donna went on a picnic. She spent $686.18 on the bus fare, $483.93 on food, and $663.47 on shopping. If she had two $1,000 notes with her, then how much amount is left with her now?

A. $172.90

B. $170.49

C. $165.18

D. $166.42

Ans: D

Bus fare = $686.18
Food = $483.93
Shopping = $663.47

Solution:
Total spent = Bus fare + Food + Shopping
Total spent = 686.18 + 483.93 + 663.47 = $1833.58

$2000 = money
Money left = Money - Total spent
Money left = 2000 - 1833.58
Money left = **$166.42**

Time, Date, and Direction Problems

Kim left the library at exactly 3:15 PM, and drove to the museum at an average speed of 40 kilometres per hour. If the museum was 60 kilometres from the library, at what time did he arrive at the museum?

    A. 4:15 PM

    B. 4:30 PM

    C. 4:45 PM

    D. 5:00 PM

    E. 5:15 PM

Ans: C

Given:
3:15 PM
40kmph
60km

Solution:
60/40 = 1.5 hours
3:15 + 1hour 30 mins = **4:45 PM**

Speed Distance and Time

A bee flew from the beehive to the flower garden at an average speed of 50 metres per hour.
Then, the bee flew back to the beehive from the flower garden in the same direction. If the distance between the beehive and the garden was 120 metres and the total time of the bee for the roundtrip was 5 hours 24 minutes, what was the average speed of the bee on its return trip to the beehive?

    A. 60 metres per hour

    B. 50 metres per hour

    C. 48 metres per hour

    D. 40 metres per hour

    E. 35 metres per hour

Ans: D

Given:
V1 = 50 m per hour
V2 = ?
d = 120 m
Total T = 5 hrs and 24 mins or 5.4 hours

Solution:
t1 = 120/50 = 2.4 hours
t2 = 5.4 - 2.4 = 3 hrs return trip
V2 = 120/3 = **40 meters per hour**

Numbers, Patterns, and Sequences

The times on the analogue clocks below follow a pattern.

What time will the next analogue clock show?

A. 9:30

B. 10:00

C. 10:30

D. 11:00

E. 11:30

Ans: A - 9:30

SOLUTION:

Each clock shows a time that is 30 minutes later than the time on the clock before it.

Since the last clock shows 9:00, the next clock will show the time of **9:30**

Ratio and Proportion

A rectangular garden has a width of 200 centimetres and 250 millimetres and a length of 6 metres.

What is the ratio of the width to the length of the rectangular garden?

   A. 1 to 4
   B. 1 to 3
   C. 3 to 8
   D. 1 to 2
   E. 3 to 4

Ans: C

Given:
W = 200 cm and 250 mm
L = 6 meters

Solution:
Convert to meters
200 cm x 1/100 = 2 m
250 mm x 1/1000 = 0.25 m
0.2 + 0.025 = 2.25 m
W:L = 2.25/6 = ⅜ or **3 to 8**

Perimeter and Area

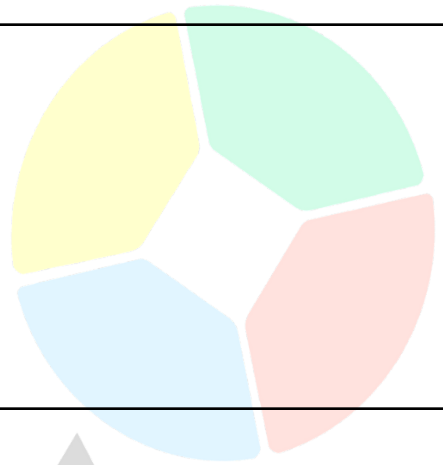A square coaster measures 8 centimetres on one side.

What is the area of the coaster?

   A. 16 square centimetres
   B. 24 square centimetres
   C. 32 square centimetres
   D. 64 square centimetres
   E. 80 square centimetres

Ans: D

Given:
Side = 8 cm

Solution:
Area = 8(8)
Area = **64 cm^2**

Line of Symmetry, Grid, Folding, and Nets

Jake used the grid below to create the password for his email

5	A	R	I	V	U
4	M	F	W	S	G
3	B	Y	K	N	T
2	Q	J	Z	H	L
1	D	E	P	O	C
	1	2	3	4	5

For example, the letter **A** can be written as (1,5) and the letter **Z** can be written as (3,2). If Jake's password to his email is (4,2)(2,1)(5,2)(3,1), what is his password?

A. DROP   D. HELP
B. FIRE   E. HOME
C. FUND

Ans: D

Given

5	A	R	I	V	U
4	M	F	W	S	G
3	B	Y	K	N	T
2	Q	J	Z	H	L
1	D	E	P	O	C
	1	2	3	4	5

Solution:
A = (1,5)
Z = (3,2)

Let (X,Y)
X = Horizontal
Y = Vertical

(4,2) = H
(2,1) = E
(5,2) = L
(3,1) = P
Therefore the answer is **HELP**

Data and Statistics

The table below compares the number of medals won by Beauxbatons Academy of Magic, Durmstrang Institute for Magical Learning, and Hogwarts School of Witchcraft and Wizardry in 2005 and 2008.

MEDALS WON		
SCHOOL	2005	2008
Beauxbatons Academy of Magic	12	9
Durmstrang Institute for Magical Learning	8	11
Hogwarts School of Witchcraft and Wizardry	10	15

How many more medals did Hogwarts School of Witchcraft and Wizardry win in 2008 than the number of medals won by Beauxbatons Academy of Magic in 2008?

   A. 2 medals

   B. 4 medals

   C. 6 medals

   D. 9 medals

   E. 15 medals

Ans: C

Given

MEDALS WON		
SCHOOL	2005	2008
Beauxbatons Academy of Magic	12	9
Durmstrang Institute for Magical Learning	8	11
Hogwarts School of Witchcraft and Wizardry	10	15

Solution:
See the highlighted yellow
15 - 9 = 6 medals

Hogwarts School of Witchcraft and Wizardry has **6 more medals** than Beauxbatons Academy of Magic in 2008.