

**YEAR SIX** Mathex 2014

Team

Question 1

The 'Clean as a Whistle Car Wash' can wash 14 cars an hour. If it is open 12 hours a day, 5 days a week, how many cars can it wash in a week?

**YEAR SIX** Mathex 2014

Team

Question 2

What is the difference between  $150 \times 150$  and  $134 \times 166$ ?

**YEAR SIX** Mathex 2014

Team

Question 3

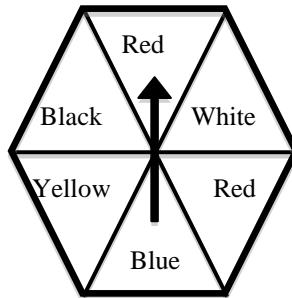
Joe made a trip from Bluetown to Redtown. On the first day he travelled half the distance between the two towns. On the second day he travelled half of the remaining distance. He then had 100km left to travel. How far is it from Bluetown to Redtown?

**YEAR SIX** Mathex 2014

Team

Question 4

The arrow on this spinner is spun once. What is the chance of obtaining red?



**YEAR SIX** Mathex 2014

Team

Question 5

A cake weighs 1.5kg. If the cake were cut into 5 equal pieces, how many grams would each piece weigh?

**YEAR SIX** Mathex 2014

Team

Question 6

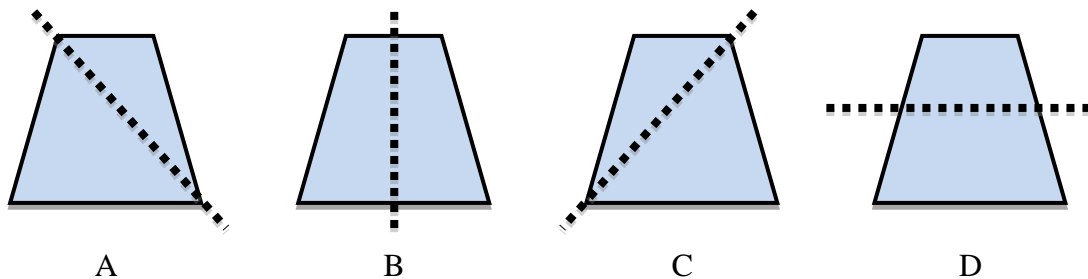
Sue is allowed to watch 40 hours of television each week. If she watches 20 hours during the weekend, how many hours on average does she watch each weekday?

Question 7

What is the difference between the sum of the odd counting numbers between 20 and 30 and the sum of the even counting numbers between 20 and 30?

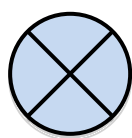
Question 8

Which shape can be folded on the dotted line so that the two parts match exactly?

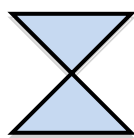


Question 9

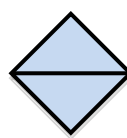
On planet Efilar they have their own symbols for numbers. Write the number 30 050 in the Efilar system.



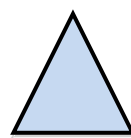
10 000



1000



100



10

**YEAR SIX** Mathex 2014

Team

Question 10

In parking meters downtown you can get 15 minutes parking for 10c. Dad put a 50c and a 20c piece into the parking meter at 3:15pm. At what time did the parking meter expire?

**YEAR SIX** Mathex 2014

Team

Question 11

Freda and Fred ladybird were playing a jumping game on the number line. Fred can jump three numbers at a time; Freda can only jump two numbers. Fred started at 1 and Freda started at 30. If they both jumped together, how many jumps did the ladybird with the least number of jumps make to get to 100?

**YEAR SIX** Mathex 2014

Team

Question 12

Six businessmen meet for lunch and shake hands with each other. How many handshakes are there?

**YEAR SIX** Mathex 2014

Team

Question 13

A plane leaves Wellington for London at 1545 hours (New Zealand time) on Wednesday. It is a 22-hour flight. What day and time does the plane arrive in London? (New Zealand time).

**YEAR SIX** Mathex 2014

Team

Question 14

A cake of soap has a mass of 125 grams. What is the mass of 540 cakes of soap? (Answer must be in kilograms).

**YEAR SIX** Mathex 2014

Team

Question 15

Three quarters of a kilogram of carrots cost \$6.30. How much does 250 grams of carrots cost?

**YEAR SIX** Mathex 2014

Team

Question 16

What is the sum of the prime numbers between 15 and 35?

**YEAR SIX** Mathex 2014

Team

Question 17

Jogging around an oval track, Tui can cover 50 metres in 20 seconds. One lap of the track is 400 metres. If Tui jogs at the same pace for one hour, how many laps of the track will he have run?

**YEAR SIX** Mathex 2014

Team

Question 18

What percentage of the shape is shaded?



**YEAR SIX** Mathex 2014

Team

Question 19

I have three dogs of different ages. If I add their ages together I get 15. If I multiply their ages together I get 45. How old are my dogs?

**YEAR SIX** Mathex 2014

Team

Question 20

It's 7 km from Tim's house to where his grandma lives. It's uphill on the way there so he can only cycle at 14 kph but he can do 21 kph on the way back. Tim leaves his house at 6 pm. How long can he stop at his grandma's house if he wants to be back for his favourite TV programme at 7 pm?

**YEAR SIX ANSWERS 2014**

20. 10 minutes

19. 1, 5, 9

18. 40%

17. 22 laps or 22.5 laps

16. 119

15. \$2.10

14. 6.25kg

13. 1345 hours Thursday / quarter to 2pm on Thursday / 1:45pm on Thursday

12. 15

11. 33

10. 5 pm

9. 

8. B

7. 25

6. 4 hours

5. 300 grams

4. Needs to write two sixths [  $\frac{2}{6}$  ] or one third [  $\frac{1}{3}$  ] as fraction  
Not 2 out of 6 or 1 out of 3.

3. 400 km

2. 256

1. 840 (cars)



