Mathswell 2018 Y11 Problem Solving Part 1

School: _____ Students 1. _____
2. _____
3. _____

TOTAL

Time allowed: 15 minutes

Instructions

Scrap paper and calculators are allowed.
The use of the internet is not allowed.

1. One team member collects the first question from the marker.
2. The group is allowed to work on it for as long as they wish.
3. When they have a solution they write it on the question sheet and hand to the marker.
4. The marker is allowed to give two responses:
   Either CORRECT in which case the next question is given to the team
   Or INCORRECT in which case the team decides whether to try again or pass and ask for the next question.
   If a question has 2 or more parts to the answer the marker can not indicate which parts of the answer are correct if the full correct answer has not been given.
5. Two attempts only per question are permitted.
6. Once passed, a the team can not come back to answer a passed question.
7. The marker puts a tick, cross of *P* (for pass) in the appropriate column for each question.
8. In the event of a draw we will go back to see which team had the most correct first attempts
9. When time is up, tally up the number of correct answers (1st or 2nd attempts) and write the total above. Get the team to write their names above. RETURN this sheet to the organiser. The question sheets can stay with the team.

	Answer	1st	2nd
1	4/9 or 0.4444….		
2	5		
3	162°		
4	$b = 4$		
5	10 units		
6	18 pears		
7	648 numbers		
8	$x = -1, 3$		
9	$b = -9/7$ or -1.2857…		
10	$a = 16$		
11	15 km		
12	2 units		

Mathswell 2018 Y11 Problem Solving Part 2

School: _____ Students 1. _____
2. _____
3. _____

TOTAL

Time allowed: 15 minutes

Instructions

Scrap paper and calculators are allowed.
The use of the internet is not allowed.

1. One team member collects the first question from the marker.
2. The group is allowed to work on it for as long as they wish.
3. When they have a solution they write it on the question sheet and hand to the marker.
4. The marker is allowed to give two responses:
   Either CORRECT in which case the next question is given to the team
   Or INCORRECT in which case the team decides whether to try again or pass and ask for the next question.
   If a question has 2 or more parts to the answer the marker can not indicate which parts of the answer are correct if the full correct answer has not been given.
5. Two attempts only per question are permitted.
6. Once passed, a the team can not come back to answer a passed question.
7. The marker puts a tick, cross of *P* (for pass) in the appropriate column for each question.
8. In the event of a draw we will go back to see which team had the most correct first attempts
9. When time is up, tally up the number of correct answers (1st or 2nd attempts) and write the total above. Get the team to write their names above. RETURN this sheet to the organiser. The question sheets can stay with the team.

	Answer	1st	2nd
13	$1+\sqrt{2} \approx 2.4142...$ cm		
14	64		
15	82.5%		
16	5/9 or 0.55555…		
17	$\sqrt{18} = 3\sqrt{3} \approx 5.196...$		
18	$18\sqrt{3} \approx 31.1769...$ cm²		
19	$8\pi - 16 \approx 9.1327...$ cm²		
20	Ratio = 1/3		
21	$ab = 3$		
22	$r = 6$cm		
23	$A = 1$		
24	$DC = 8+\sqrt{3} \approx 9.7320...$		