



Elementary School Maps Graphs &  
Charts Test 11022

---

Problems 1-40

Name: \_\_\_\_\_

School: \_\_\_\_\_

Grade: \_\_\_\_\_

Correct: \_\_\_\_\_

Incorrect: \_\_\_\_\_

SCORE (5 x Correct - 2 x Incorrect) = \_\_\_\_\_

Scorer's Initials: \_\_\_\_\_

Scorer's Initials: \_\_\_\_\_

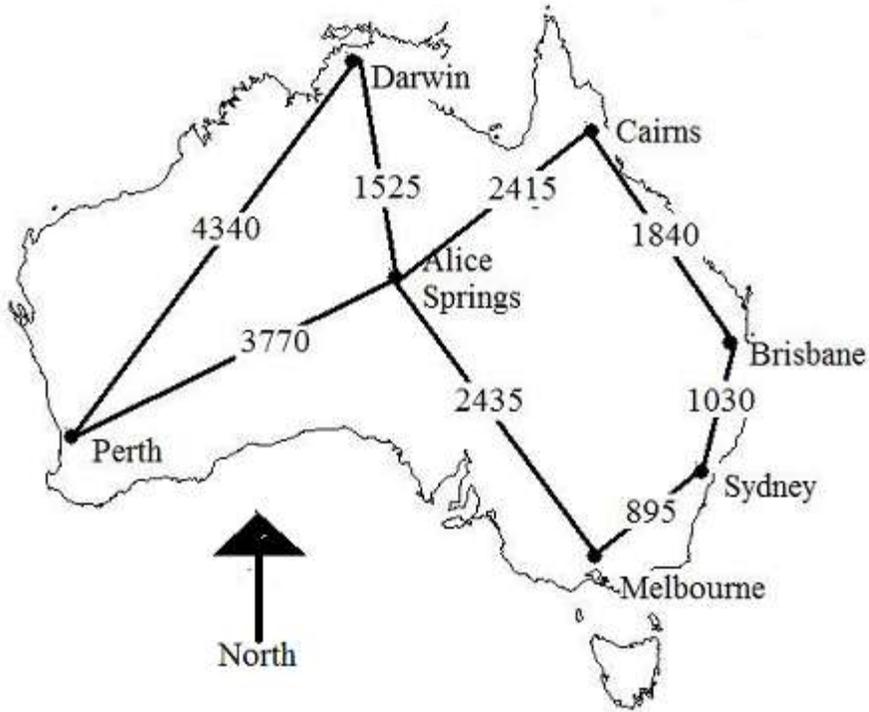
**DO NOT BEGIN UNTIL YOU ARE  
INSTRUCTED TO DO SO**

This round of the competition consists of 40 questions. You will have 30 minutes to complete the questions. This round allows the use of calculators, and calculations may also be done on scratch paper, but no other aids are allowed. All information needed to answer the questions is included in this test. Record only the letter of the answer in the blanks in the right-hand column of the competition booklet. If you complete the questions before time is called, use the remaining time to check your answers.

Scoring: Five points will be awarded for each correct answer. Two points will be deducted for each incorrect answer. No deduction is taken for skipped problems.



**Distance Map** - The below map shows driving distances in Australia. The arrow marks the direction that is North. A line connecting two cities is noted with the driving distance between those two cities. All distances are in kilometers. Use this map to answer Questions #1 through #6.



1. How far (in kilometers) is the driving distance from Perth to Darwin? 1. \_\_\_\_\_
2. Which of the cities shown is the farthest west? 2. \_\_\_\_\_
3. Robin is taking a western road trip. She drives from Cairns to Brisbane to Sydney to Melbourne to Alice Springs and back to Cairns. How far (in kilometers) does she drive in total? 3. \_\_\_\_\_
4. Ian drove from Sydney to Melbourne. It took him  $9\frac{1}{2}$  hours. What was his average speed, in kilometers per hour? (Round to the nearest whole number). 4. \_\_\_\_\_
5. Scotty drove from Brisbane to Sydney. During trip, his car used 63 litres of fuel. What was his mileage in kilometers per litre? (Round to the nearest whole number). 5. \_\_\_\_\_
6. 1 kilometer is equal to 0.625 miles. In miles, what is the driving distance from Alice Springs to Melbourne? (Round to the nearest whole number.) 6. \_\_\_\_\_

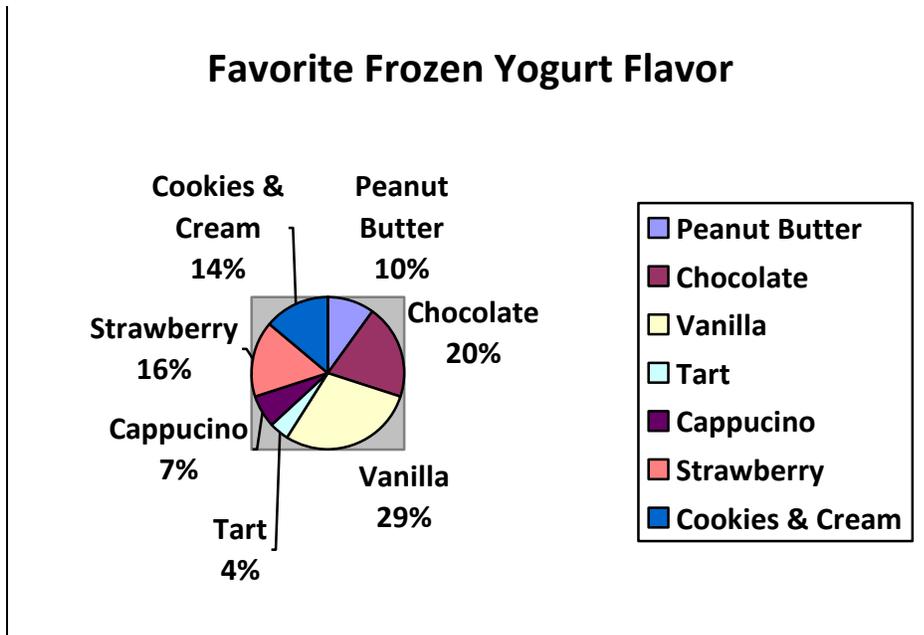
**Chart** - The following chart shows games played, points scored and rebounds for Stanford University women's basketball team players during the 2009-2010 season. Use this chart to answer Questions #7 through #13.

Stanford Women's Basketball Players, 2009-2010 Season

Player Name	Games Played	Minutes Played	Points Scored	Rebounds Gathered
Nnemkadi Ogwumike	38	1156	704	376
Kayla Pedersen	38	1274	599	362
Jayne Appel	37	1010	490	321
Jeanette Pohlen	37	1180	345	108
Rosalyn Gold-Onwude	37	922	255	102
Joslyn Tinkle	34	463	155	99
JJ Jones	35	644	157	51

7. Which player scored the most points during the season? 7. \_\_\_\_\_
8. How many games did Joslyn Tinkle play during the season? 8. \_\_\_\_\_
9. What player played the most second-most minutes during the season? 9. \_\_\_\_\_
10. How many more points than JJ Jones did Rosalyn Gold-Onwude score? 10. \_\_\_\_\_
11. How many points per game did Jayne Appel average? (Round to the nearest whole number) 11. \_\_\_\_\_
12. How many rebounds per game did Kayla Pedersen average? (Round to the nearest whole number) 12. \_\_\_\_\_
13. How many rebounds did all seven players gather, combined? 13. \_\_\_\_\_

**Pie Chart** - The following pie chart gives the result of a recent survey to determine the most popular flavor of frozen yogurt in the school. Use this chart to answer Questions #14 through #20.



14. What flavor of frozen yogurt was the most popular? 14. \_\_\_\_\_
  
15. What percentage of students said that Strawberry was their favorite flavor? 15. \_\_\_\_\_
  
16. What flavor was liked best by 14% of the respondents? 16. \_\_\_\_\_
  
17. What was the percentage difference between the percentage of people who liked Strawberry the best and the percentage of people who liked Cappucino the best? 17. \_\_\_\_\_(%)
  
18. If 225 people took the survey, how many people liked Tart the best? 18. \_\_\_\_\_(%)
  
19. What percentage of people liked either Chocolate, Strawberry, or Vanilla the best? 19. \_\_\_\_\_
  
20. If 21 people in the survey said they liked Cookies & Cream the best, how many people said they liked Peanut Butter the best? 20. \_\_\_\_\_

**Time Chart** - The following time chart shows the train schedule for different trains on the Japanese Tohoku Shinkansen ("Bullet Train") line.

The top row is the train name and number, the leftmost column is the station name, the other columns show the time a specific train arrives at a specific station.

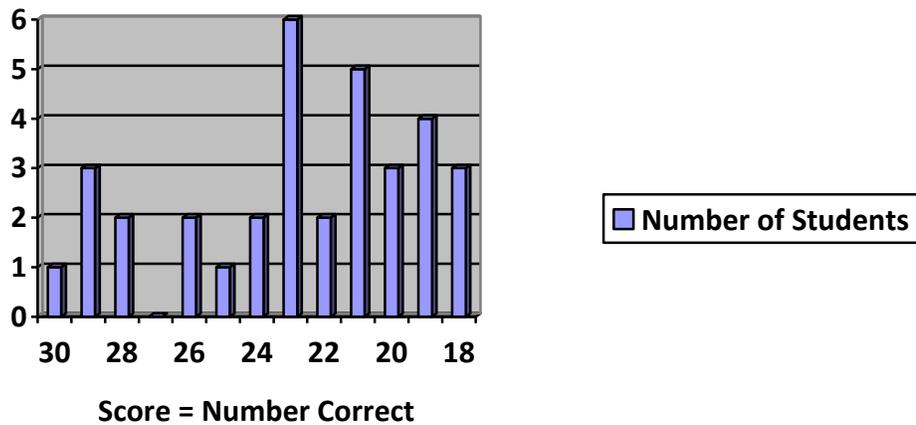
Use this chart to answer Questions #21 through #27.

Name	Hayate 72	Yamabiko 48	Hayate 8	Nasuno 270	Max Yamabiko 110	Hayate 74	Yamabiko 50
Operation date	*					*	
Hachinohe	08:27		08:57			09:24	
Ninohe	08:39		09:09			09:36	
Iwate-Numakunai			09:22				
Morioka	09:06	09:10	09:41			10:06	10:10
Shin-Hanamaki		09:22					10:22
Kitakami		09:29					10:29
Mizusawaesashi		09:38					10:38
Ichinoseki		09:48					10:48
Kurikoma-kogen		09:57					10:57
Furukawa		10:06					11:06
Sendai	09:55	10:21	10:26		10:44	10:55	11:21
Shiroishizao					10:59		
Fukushima		10:47			11:18		11:47
Koriyama		11:01		11:05	11:33		12:01
Shin-Shirakawa				11:18			
Nasushiobara				11:32			
Utsunomiya		11:31		11:50	12:06		12:31
Oyama				12:01			
Omiya	11:11	11:59	11:43	12:19	12:31	12:11	12:59
Ueno	11:31	12:19	12:03	12:39	12:51	12:31	13:19
Tokyo	11:36	12:24	12:08	12:44	12:56	12:36	13:24

21. What time does the Max Yamabiko 110 train arrive at Omiya Station? 21. \_\_\_\_\_
22. The Hayate 8 train arrives at which station at 9:09? 22. \_\_\_\_\_
23. What is the name and number of the train that only goes from Koriyama Station to Tokyo Station? 23. \_\_\_\_\_
24. How long (in minutes) does it take the Yamabiko 50 train to go from Kitakami Station to Furukawa Station? 24. \_\_\_\_\_
25. What is the name and number of the train that takes the longest to go from Hachinohe Station to Sendai Station? 25. \_\_\_\_\_
26. Ichiko is going from Morioka to Tokyo, with a stop in Sendai to visit with her friend Hurami who will meet her at the station. She plans to take the Hayate 72 train from Morioka to Sendai, get off the train at Sendai, visit with Hurami, then get on the Yamabiko 50 train and ride it to Tokyo. How much time (in hours and minutes) will Ichiko have in Sendai to visit with her friend? 26. \_\_\_\_\_
27. It is 281 kilometers from Sendai Station to Omiya Station. What is the average speed of the Hayate 72 train between these stations, in kilometers per hour? (Round to the nearest whole number) 27. \_\_\_\_\_

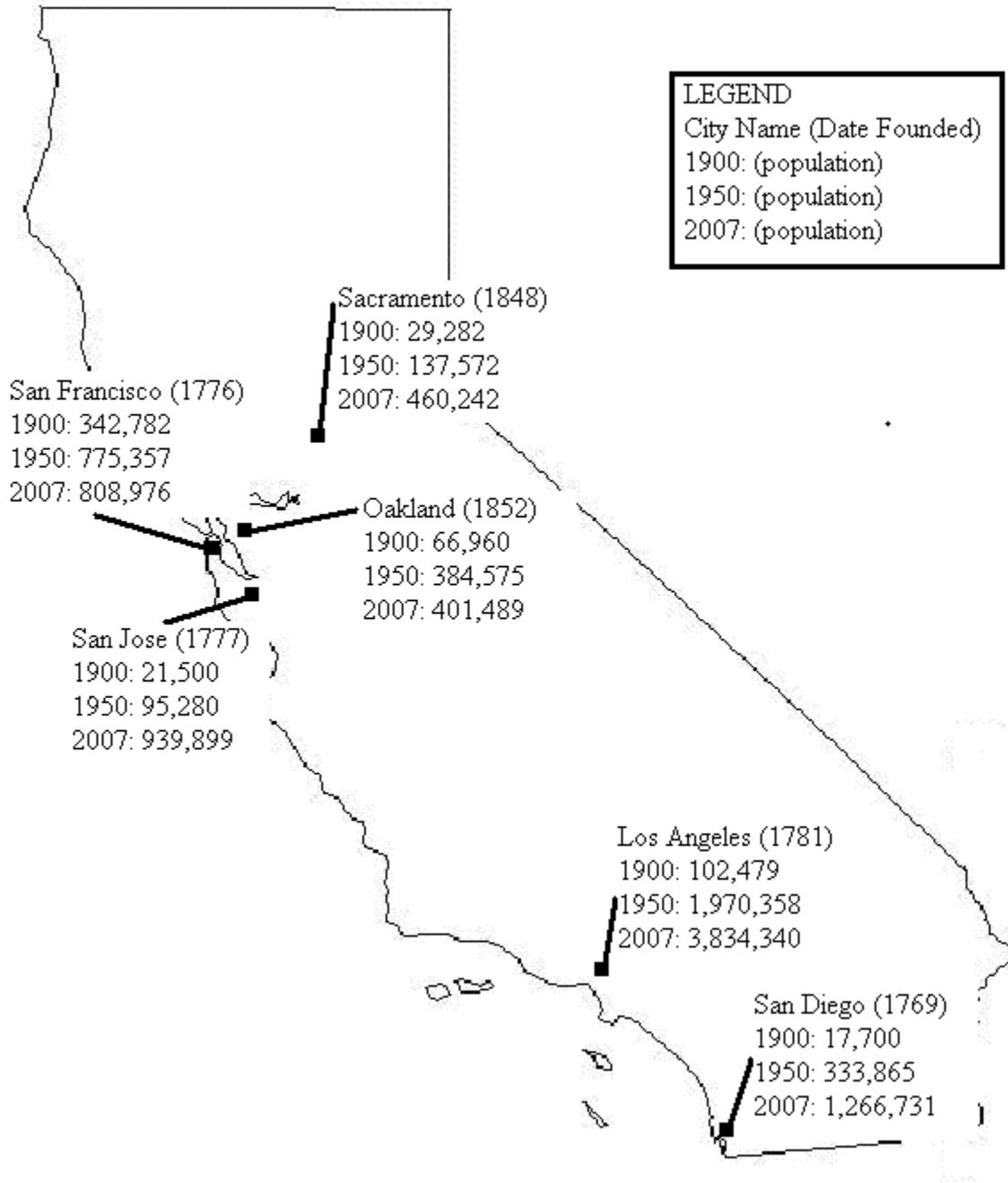
**Bar Graph** - The following bar graph represents the results of the Sprint Test at an Elementary School Math Contest in 2009. Use this bar graph to answer Questions #28 through #33.

**Sprint Test Scores**



28. How many students got 19 problems correct? 28. \_\_\_\_\_
29. How many more students got 21 correct than got 26 correct? 29. \_\_\_\_\_
30. A certain score was achieved by no (zero) students. What was that score? 30. \_\_\_\_\_
31. There are four different scores that were achieved by exactly 2 people each. What is the sum of those four scores? 31. \_\_\_\_\_
32. What score was achieved by the most number of students? 32. \_\_\_\_\_
33. On Ani's four-person team, each member of the team had a different individual score. None of the people on the team had a score of 30. What is the highest possible value of the average of the individual scores of Ani's team? (Round to the nearest whole number) 33. \_\_\_\_\_

**Historical Map and Chart** - The following historical map and chart shows the dates that various California cities were established and the growth in population of these cities over time. Use this historical map and chart to answer Questions #34 through #40.



34. Which of the above cities was founded first? 34. \_\_\_\_\_
35. What was the population of San Francisco in 1900? 35. \_\_\_\_\_
36. Which city had the smallest population in 1950? 36. \_\_\_\_\_
37. By how much (whole number) did Sacramento's population grow between 1900 and 1950? 37. \_\_\_\_\_
38. What was the difference in population between Sacramento and San Jose in 1900? 38. \_\_\_\_\_
39. By what percentage did San Francisco's population grow from 1950 to 2007? (Round to nearest whole number) 39. \_\_\_\_\_
40. What is the sum of the populations of all six above cities in 2007? 40. \_\_\_\_\_