



## Strategic Thinking Responses and Scoring

**Question 1.** The wise man advised the sheik's sons to exchange horses and to run the race in the conventional way.

If you found the correct answer in one minute or less	10 points
more than one but less than two minutes	8 points
more than two but less than three minutes	6 points
more than three but less than four minutes	4 points
if it took five or more minutes	2 points
If you did not find the correct answer as given	no points.

**Question 2.** They are contestants in a beauty pageant. The first has just been declared the 'winner' and is overcome with emotion; the others are the 'runners-up'.

If you found this, or a comparable answer in one minute or less	10 points
more than one but less than two minutes	8 points
more than two but less than three minutes	6 points
more than three but less than four minutes	4 points
or solved in four or more minutes	2 points
If you found no similar response to that provided	no points

**Question 3.** The series is known as the Fibonacci series, and it represents exponential growth. Your examples of its applications could include:

A galaxy; any vortex (whirlwind / cyclone / maelstrom); a nautilus shell (cross-section); the arrangement of seeds in a sunflower or pine cone; or similar. Count your score as follows;

If you recognized the series as Fibonacci or as an exponential growth model	6 points
Each example comparable to those given above (max. of four)	1 point each

**Question 4.** The next line would be:

1 1 1 3 2 1 3 2 1 1

Each line describes the line above as single digit numbers. There's no mathematics or arithmetic involved, just identification of the numbers used.

This is a 'toughie', yet so elegant.

If you did achieve the right answer in under three minutes	10 points.
if it took you over three minutes,	8 points
if it took over five minutes,	6 points
if it took more than ten minutes	4 points
and more than fifteen minutes,	2 points
If you failed this one, and most do, don't feel badly, but	no points





**Question 5.** The fly's name is DUSTY - no, it wasn't stated anywhere but it's derived from the formula that's used to solve the problem - Distance = Speed x Time (DuSTy). This is a 'right brain' answer and it's a 'freebie'!

Meanwhile, and seriously, the fly has flown 32 kms. Here's the reasoning -

	<i>Distance</i>	=	<i>Speed</i>	x	<i>Time</i>
Cyclists	40 km	=	30kph (20+10)	x	1 hour 20 minutes
Fly	???	=	24kph	x	1 hour 20 minutes

- A correct answer (32 km) in less than one minute will earn you 10 points
- if between one and two minutes 8 points
- if between two and three minutes 6 points
- if between three and four minutes 4 points
- if more than four minutes 2 points

If you did not find this answer, you'll get no points

**Question 6.** You should have advised her to extract any one of the two stones from the bag, then dropping it onto the pathway, to ask the moneylender to check in the bag for the stone that remains - the one she did *not* choose. By inference, she must have chosen the 'white stone'. The moneylender is in no position to repudiate her claim.

- If you discovered the right solution in one minute or less 10 points
- more than one but less than two minutes 8 points
- more than two but less than three minutes 6 points
- more than three but less than four minutes 4 points
- or solved in four or more minutes 2 points

If you did not find the answer given above no points

**Question 7.** A picture is worth a thousand words:

1	1	2	2
1	3	3	2
4	3		
4	4		

- If you were able to resolve this layout in one minute or less 10 points
- in more than one but less than two minutes 8 points
- in more than two but under three minutes 6 points
- in more than three but less than four 4 points
- and if it took four minutes or more 2 points

If you had no solution for the construction crew no points





**Question 8.** This problem can be solved only in one way - by breaking out of the mental set of two dimensional thinking. Instead of moving the matches / pencils around on a flat surface, build a pyramid out of them with three forming the base and three the sides. This gives you four equilateral triangles.

A correct solution in one minute or less will earn you	10 points
over one but less than two minutes	8 points
more than two but under three	6 points
more than three but less than four	4 points
and more than four minutes	2 points
No correct solution - you've guessed it -	no points

**Question 9.** The correct answer is you must order 450 science books. It works this way

- Total number of students = 1000
- Number taking French = 400
- Number taking Spanish = 300
- Number taking both = 150

Because those taking both are included in both the French and the Spanish groups, they've been counted twice. It's necessary to subtract 150 from the total number of language students ( $700 - 150 = 550$ ). So we'll need 450 science textbooks.

If you got this one right in under two minutes, give yourself	10 points
if between two and three minutes,	8 points
if between three and four minutes	6 points
if between four and five minutes	4 points
and if more than five minutes were needed	2 points
If you failed to answer this one correctly, then you get	no points

**Question 10.** There's little time to spare. The five non-swimmers must hide while the swimmer crosses the river. He climbs the opposite bank and walks across the snow and into the forest. Then he retraces his steps precisely, back into the water and emerges a short distance away, and walks across the bank making another set of prints. This is repeated four more times, then he hides in the forest. There are six sets of tracks emerging from the water. Meanwhile, the other five get into the water and walk up/down-stream to the caves - as far from the point of entry as possible. They exit the water on this side and, covering their tracks as best they can, they take refuge in the caves. The pursuers will see six sets of tracks entering the water on this side and six sets exiting on the other side. Hopefully, they'll go home.

If you constructed a solution as feasible as this in less than a minute, take the full ten points. If you found a comparable solution at all, take five points. No solution means, as before, no points.





## Strategic Thinking

### Evaluation:

A score of **61 or better** indicates that you have a high aptitude for Strategic Thinking. Put it to good use - your organization needs you.

A score between **forty-one and sixty** means that you've good potential, and with a little work on developing your problem solving techniques, you will be better than the average.

If your score was **under forty**, there's work to be done. Your mind is like a muscle - if you don't use it, you'll lose it! Problem solving and Strategic Thinking is an acquired skill. It doesn't just happen. Consider investing some focused effort as of now.

**Acknowledgement:** *These problems were adapted from the excellent text "Thinking Better" by David Lewis, Ph.D. & James Greene, M.A. - McClelland and Stewart, Ltd. (ISBN 0-89256-168-8). It's a great place to start!*

**Learning Points:** You will have detected that these problems are demonstrations of the concept and techniques associated with Strategic Thinking as a process.

Questions 1 and 6 are typical of a Goal Centered approach. The essential task is to identify a 'desired outcome' that is practical to attain, and this is not always obvious. In the case of the Arab Horsemen the initial goal or outcome would appear to be 'How do I get my horse across the finish line second, when my brother is attempting to do the exact same thing?' Clearly this has no practical solution. The goal needs to be restated. The question, 'How do I get my brother's horse across the finish line first?', is resolvable - I ride it and run the race as per convention! Similarly, the Merchant's Daughter cannot retrieve a white stone from the bag, but she can leave a black stone in the bag. Her only task then, and a comparatively simple one, is to focus attention on the stone that remains rather than on the one she removed. ***If the desired goal is stated appropriately, resolution is possible.***

Questions 2, 4 and 8, are related to the method of operation. In each case the difficulty lies in having an incorrect mindset or perhaps no mindset at all. The technique is to learn to 'think outside the box'. In the Three Women teaser, the normal association of behavior and mood are disrupted. We associate tears with sorrow and misery yet can also recognize that tears can be an expression of any extreme emotion, even happiness, when we are so prompted. Smiles, likewise do not always signify 'happiness'. The Number Pyramid begs for a strategy that involves mathematics or arithmetic, and it's hard to view them as pure symbols. Four Equilateral Triangles requires a dimensional shift in perspective. If you laid the matches on a table top and shuffled them around, you likely became very frustrated before you made any attempt to go back to basics, thereby allowing the dimensional shift in thinking. ***When the situation doesn't make sense in conventional terms, the best recourse is to use unconventional approaches.***





## Learning Points/ continued...

Questions 3 and 7 are also related to the method of operation, but in a different way. In these events the challenge is in 'pattern recognition'. The Mathematical Modeling problem invites you to think about an abstracted or conceptualized pattern in more practical terms, while the L-Shaped Office Space does the reverse, a practical pattern in more conceptual terms. Switching mental 'gears' is a regular challenge for most business managers yet it remains just that - a challenge. Here again, the solution is in making associations in innovative ways, and this requires regular practice under widely varying conditions. A 'mindset' is the most frequent impediment to success. ***The mind needs regular exercise in free association to stay limber.***

Finally, Questions 5,9 and 10 are samples of misapplied or misconstrued 'givens' - the so-called facts are not what they seem to be. The Cyclists and the Fly challenge uses a formula with which we are all very familiar, the relationship between Distance, Speed and Time. The way the problem is presented does not encourage us to apply this simple formula. The need is to discover how long the fly is in the air, for this information together with the speed (known) will give us the distance. The School Textbooks, likewise confuses us when it fails to make obvious the fact that those taking both language courses are counted twice - once in the French set and again in the Spanish set. The complexity of detail provided in the case of the Political Prisoners again invites us to become overly complicated in our approach, when the need is for simplicity. ***The 'best practice' in problem solving, and also in Strategic Thinking, is to go for the most 'elegant' solution available - and it's usually more evident than we realize.***