

Opportunity Class Placement Test

Thinking Skills

Explained answers for the sample test

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- 1 From the departure and arrival times, we can work out that the slow train took 6 hours to reach Braxton.

Since the express train was four times as fast as the slow train, it must have taken 1 hour 30 minutes to reach Braxton, and so it departed from Lode at 5:30 pm (7:00 pm minus 1 hour 30 minutes), which is option **D**.

- 2 The statement should provide a reason to support the suggestion that dance lessons should be an important part of school life. An example of a school-related benefit that is brought by dancing would do this, so option **A** is correct.

- 3 Working through the list of pets that Alex keeps:

Snakes are not kept by either of the others.

Fish are also kept by Carlos.

Lizards are not kept by either of the others.

Rats and frogs are both also kept by Ben and Carlos.

The correct answer is therefore option **D**.

- 4 Of the three subjects that I want to study, English and science are contained in two of the lists and history is only contained in List 1. I can therefore choose my final subject from any that appear in List 2, List 3 or List 4, but not any subject which only appears in List 1.

Arts appears in List 1 and nowhere else.

Geography appears in List 1 and also List 3.

Health appears in List 2.

PE appears in List 1 and also List 4.

The only subject that I cannot choose as my final subject is arts. The correct answer is therefore option **A**.

- 5 We know that *only* students who attend the meeting at lunchtime will be allowed to go on the excursion, but there may be other reasons why some of these students are not able to go. So Mia's reasoning is incorrect.

Noah won't be able to go to the meeting at lunchtime today as he will be at cricket practice, so it is certain that he won't be allowed to go on the excursion. So Tyler's reasoning is correct. The correct answer is option **B**.

- 6 We are told that Archie is to the right of Beau, and if Carter is to the left of Archie, Archie must be to the right of Carter. Archie is therefore to the right of both of the others and so must be furthest to the right. The correct answer is option **D**.
- 7 There will be 18 evenings on which the show will be performed. There will be 6 days on which an afternoon performance will also take place. So there will be 24 performances in total, which is option **D**.
- 8 Jim has found a jacket that matches the description from Darryl and has assumed that it must be Jane's. It might not be Jane's because there might be other blue jackets that have hoods, which is option **C**.
- 9 The statement should provide a reason to support the claim that anyone riding a motorcycle should wear a helmet. One such reason is that wearing a helmet reduces the risk of serious injury, which is option **B**.
- 10 Identify the pairs of numbers that will be on opposite sides when each net is folded into the dice.

For net A, the pairs will be 1-4, 3-6 and 5-2, which do not all add up to 7.
For net B, the pairs will be 5-3, 2-1 and 6-4, which do not all add up to 7.
For net C, the pairs will be 6-1, 5-2 and 3-4, all of which add up to 7.
For net D, the pairs will be 4-2, 3-5 and 6-1, which do not all add up to 7.
The correct answer is therefore option **C**.

- 11 The instructor's statement says that anyone with less than 20 hours of driving practice does not have any chance of passing their test. Therefore, there cannot be any learner drivers who have had less than 20 hours of practice but will pass their test. Option **B** is therefore correct.
- 12 The fact that an emu's egg is dark green and large does not mean that any egg that is dark green and large must be an emu's egg, so Charlotte's reasoning is incorrect.

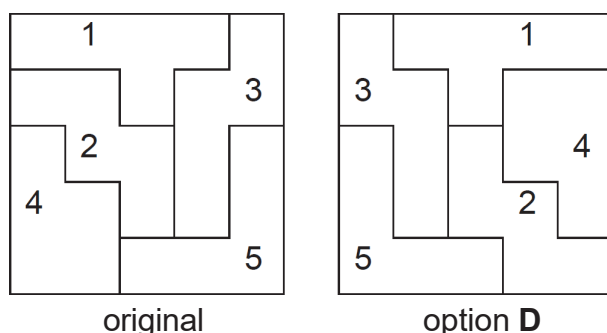
The fact that an emu's egg can measure up to 13 cm long does not mean that it is not possible for the egg to measure just 10 cm, so Oliver's reasoning is incorrect. Option **D** is therefore correct.

- 13 There is one mark placed on the string initially. After it has been folded once, two more marks will have been placed on the string. After it has been folded a second time, four more marks will have been placed on the string.

The string therefore has seven marks equally spaced along it, creating eight sections along the string, each of which is 4 cm long. The total length of the piece of string will be 32 cm (4 cm multiplied by 8 sections), which is option **D**.

- 14 Mrs Hughes has concluded that some of the class must have been wearing contact lenses because she knows that ten of the children are short-sighted and she only saw seven wearing glasses. Therefore, she must think that the short-sighted children will either wear glasses or contact lenses. This is only true if *all* short-sighted people *always* wear either one or the other, which is not the case. Option **C** shows the mistake that she has made.
- 15 Since Kamilla and Jess are next to each other, Max and Lucy must also be next to each other. Jess is sitting diagonally opposite Lucy, so she must be sitting opposite Max. Therefore, option **D** is correct.

- 16 The same shapes were used in option **D**, as shown below:



- 17 The statement should provide a reason to support the claim that plastic pollution in our oceans affects us too. One such reason is that the pollution affects the food that we eat, which is option **D**.
- 18 The only time that the fire alarm could go off when there is not a real fire would be for a drill and therefore would be in the afternoon. Yuri's reasoning is therefore correct.

The fire alarm might not go off when there is a real fire, so Bindi's reasoning is also correct. The correct answer is therefore **C**.

19 The changes in the marks were as follows:

Uma 84 $\rightarrow$ 79, a drop of 5.
Finn 82 $\rightarrow$ 88, an increase of 6.
Lily 75 $\rightarrow$ 86, an increase of 11.
Arlo 73 $\rightarrow$ 78, an increase of 5.
Leon 73 $\rightarrow$ 73, no change.
Sophie 69 $\rightarrow$ 78, an increase of 9.

The biggest improvement was made by Lily, which is option **B**.

20 If Bilal does not play tomorrow, then Arthur must be playing. Since Arthur is playing, Conor must be playing and David must not be playing. So Arthur and Conor will be in the team, which is option **C**.

21 Faisal's statement describes the minimum amount of practice that is needed to have any chance of passing the exam. Sajid has assumed that any amount of practice that is more than this will guarantee that the exam is passed, so option **D** is correct.

22 Consider each of the pairs listed as the answer options.

Option A (dominoes 1 and 3): domino 1 could be placed in either position, but domino 3 can only be placed top right. This two-domino combination will complete the square.

Option B (dominoes 2 and 5): domino 2 can only be placed top right, domino 5 can be placed bottom right. This two-domino combination will complete the square.

Option C (dominoes 3 and 4): domino 3 can only be placed top right, domino 4 can also only be placed top right. This two-domino combination will *not* complete the square.

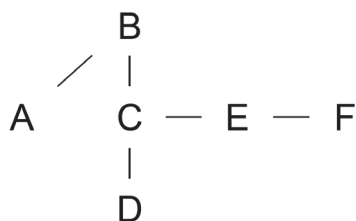
Option D (dominoes 4 and 5): domino 4 can only be placed top right, domino 5 can be placed bottom right. This two-domino combination will complete the square.

Option **C** is correct.

- 23** Since Town B is north of Town C, and Town C is north of Town D, Town B must be north of Town D. Town B is northeast of Town A, which means that Town A must be further to the west than Town B and so is further to the west than Town D.

Towns E and F are both further to the east than Town B, so must be further to the east than Town D.

So Town A is the only one that could be northwest of Town D, which is option **A**. The positions of the towns would be as shown below:



- 24** The statement should provide a reason to support the claim. If the fact that countries are doing more trade with each other means that they are less likely to go to war with each other, then this is better for everyone and supports the claim. The correct answer is therefore option **C**.

- 25** For each ingredient we can work out the number of sets of 8 cupcakes that could be made (if there was enough of all other ingredients).

Flour 6 sets
Sugar 5 sets
Butter 3 sets
Eggs 2.5 sets

The eggs are therefore the ingredient that limits the number of sets that can be made and $2.5 \times 8 = 20$ cupcakes can be made. The correct answer is option **C**.

- 26** If the team loses this week, then Mr Rudd will be in a bad mood and therefore will set extra homework, so Dylan's reasoning is correct.

We know that the class gets extra homework when Mr Rudd's team has lost, but there might be other reasons why they could get extra homework, so Wei's reasoning is incorrect. Option **B** is therefore correct.

- 27** If the middle ball is red then the collisions are red → red, followed by red → yellow.

If the middle ball is yellow then the collisions are red → yellow, followed by yellow → yellow.

In either case, there is a point where a red ball hits a yellow ball, so option **B** is correct.

- 28** The view shows that there are four separate rooms. The easiest ones to identify in the plan are the two rectangular ones that are adjacent to each other. Option **D** is the only one that has these two rooms shown and adjacent, so must be the correct answer.

- 29** Since the white chest is two places away from the black chest, and the black chest is on the far right, the white chest must be the middle one of the line. The purple chest cannot be next to the white chest, so it must be on the far left. The yellow chest is next left to the white one, so the order of the chests must be:

Purple	Yellow	White	Red	Black
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The white chest is two places away from the chest with the key, and the red chest is not next to the chest with the key, so the key must be in the purple chest, which is option **D**.

- 30** Since everyone had to vote for two out of the three colours, knowing that no student voted for both red and green tells us that all students voted for yellow. Yellow must also be the *only* colour that all students voted for, since each colour got at least one vote. The outcome will therefore be to paint the classroom yellow, and option **A** is correct.

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