Grade	11	Skills	Evaluate & Interpret	
Difficulty level	Difficult	Question	اختيارات	1
			Choices	

In a pizza restaurant, you can get a basic pizza with two toppings: cheese and tomato. You can also make up your own pizza with extra toppings. You can choose from four different extra toppings: olives, ham, mushrooms and salami.

Ross wants to order a pizza with two different extra toppings.

How many different combinations can Ross choose from?

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Grade	11	Skills	Employ	
Difficulty level	Medium	Question	المساحة	2
			Area	

There are three apartments in the building. The largest, apartment 1, has a total area of 95m².

Apartments 2 and 3 have areas of 85m² and 70m² respectively. The selling price for the building is 300 000 zeds.
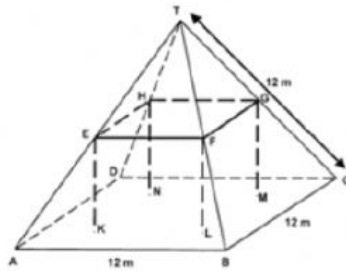
How much should the owner of apartment 2 pay?

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Here you see a photograph of a farmhouse with a roof in the shape of a pyramid

Below is a student's mathematical model of the farmhouse roof with measurements added

The attic floor, ABCD in the model, is a square. The beams that support the roof are the edges of a block (rectangular prism) EFGHKLMN. E is the middle of AT, F is the middle of BT, G is the middle of CT and H is the middle of DT. All the edges of the pyramid in the model have length 12 m.

1) Calculate the area of the attic floor ABCD.
   ....

2) Calculate the length of EF, one of the horizontal edges of the block.
   ....

Grade	11	Skills	Employ
Difficulty level	Easy	Question 4	سعر الصرف
			Exchange Rate

سافر أحمد مع أهله إلى سنغافورة من أجل العلاج ثم اضطر للسفر من سنغافورة إلى جنوب أفريقيا في مهمة عمل رسمية
لمدة 3 أشهر. احتاج أحمد لتحويل بعض الدولارات السنغافوريَة (SGD) إلى راندات جنوب أفريقيا (ZAR)

وجد أحمد أنَّ سِعر صرف الدولار السنغافوريّ إلى الراند الجنوب أفريقيَ كان

على النحو التالي : 1SGD = 4.2 ZAR

صرف أحمد 3000 دولار سنغافوريّ إلى الراند الجنوب أفريقيَ حسب سِعر الصرف ال
ما هو المبلغ الذي حصل عليه أحمد بالراند الجنوب افريقيَ.

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Ahmed-Ling from Singapore was preparing to go to South Africa for 3 months as an exchange student. He needed to change some Singapore dollars (SGD) into South African rand (ZAR).
   Ahmed found out that the exchange rate between Singapore dollars and South African rand was: 1 SGD = 4.2 ZAR Ahmed changed 3000 Singapore dollars into South African rand at this exchange rate. How much money in South African rand did Ahmed get?

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Grade	11	Skills	Employ
Difficulty level	Easy	Question 5	سعر الصرف
			Exchange Rate

عند عودته إلى سنغافورة بعد 3 أشهر، تبقَّى معه مبلغ 3900 ZAR. صرف أحمد هذا المبلغ من جديد إلى دولارات
سنغافوريَّة (SGD). علماً بأنَّ سِعر الصرف قد تغيَّر على النحو التالي: ZAR 4 = SGD 1
ما هو المبلغ الذي حصل عليه أحمد بالدولار السنغافوريّ؟

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On returning to Singapore after 3 months, Ahmed had 3 900 ZAR left. He changed this
back to Singapore dollars, noting that the exchange rate had changed to: 1 SGD = 4.0 ZAR
How much money in Singapore dollars did Ahmed get?

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Grade	11	Skills	Employ
Difficulty level	**Easy**	**Question 6**	سعر الصرف
			Exchange Rate

خلال هذه الأشهر الثلاثة ، تغير سعر الصرف من 4.2 إلى 4.0 ZAR لكل SGD. هل كان لصالح أحمد أن سعر الصرف أصبح الآن ZAR 4.0 بدلاً من ZAR 4.2 ، عندما غير راندة الجنوب أفريقي إلى دولارات سنغافورة؟ أعط تفسيرا لدعم إجابتك.

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During these 3 months the exchange rate had changed from 4.2 to 4.0 ZAR per

SGD. Was it in Ahmed's favour that the exchange rate now was 4.0 ZAR instead of 4.2

ZAR, when she changed her South African rand back to Singapore dollars? Give an

explanation to support your answer.

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'Yes', with adequate explanation.
- Yes, by the lower exchange rate (for 1 SGD) Mei-Ling will get more Singapore dollars for her South African rand.
- Yes, 4.2 ZAR for one dollar would have resulted in 929 ZAR. [Note: student wrote ZAR instead of SGD, but clearly the correct calculation and comparison have been carried out and this error can be ignored]
- Yes, because she received 4.2 ZAR for 1 SGD, and now she has to pay only 4.0 ZAR to get 1 SGD.
- Yes, because it is 0.2 ZAR cheaper for every SGD.
- Yes, because when you divide by 4.2 the outcome is smaller than when you divide by 4.
- Yes, it was in her favour because if it didn't go down she would have got about $50 less.

Grade	11	Skills	Evaluate & Interpret	
Difficulty level	Easy	Question	الزلازل	
			Earthquake	**7**

بُث فيلم وثائقي عن الزلازل و عن عدد مرات حدوثها. وتضمن نقاشا حول التنبؤ بحدوث الزلازل.
قال عالم جيولوجي: "في العشرين سنة القادمة، فرصة حدوث زلزال في الزد سيتي هي اثنان من ثلاثة".
أي مما يلي يعتبر أفضل عبارة تعكس بيان العالم الجيولوجي؟

1) $\frac{2}{3} \times 20 = 13.3$ وهذا يعني أنه بين 13 و 14 سنة من الآن سوف يحدث زلزال في الزد سيتي.

2) $\frac{2}{3}$ أكبر من $\frac{1}{2}$ ، ولهذا يمكنك أن تكون متأكدا أنه سيكون هناك زلزال في الزد سيتي في أي وقت خلال العشرين سنة القادمة.

3) فرصة حدوث زلزال في الزد سيتي في أي وقت خلال 20 سنة أكبر من فرصة عدم حدوث زلزال.

4) لا تستطيع قول ماذا سيحدث، لأنه لا أحد يمكنه أن يكون متأكدا من وقت حدوث زلزال ما.

A documentary was broadcast about earthquakes and how often earthquakes occur. It included a discussion about the predictability of earthquakes.
A geologist stated: "In the next twenty years, the chance that an earthquake will occur in Zed City is two out of three".
Which of the following best reflects the meaning of the geologist's statement?

1) $\frac{2}{3} \times 20 = 13.3$, so between 13 and 14 years from now there will be an earthquake in Zed City.

2) $\frac{2}{3}$ is more than $\frac{1}{2}$, so you can be sure there will be an earthquake in Zed City at some time
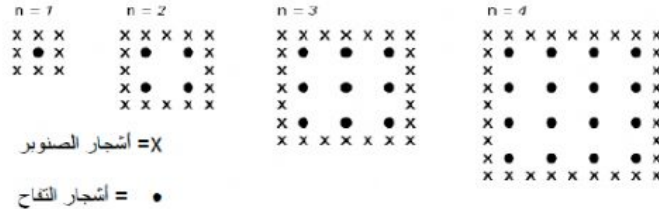
during the next 20 years.
3) The likelihood that there will be an earthquake in Zed City at some time during the next 20

years is higher than the likelihood of no earthquake.
4) You cannot tell what will happen, because nobody can be sure when an earthquake will occur.

LIVEWORKSHEETS

Grade	**11**	Skills	Formulate	
Difficulty level	Easy	Question	التفاح	**8**
			The apple	

يقوم مزارع بزراعة أشجار التفاح بحيث تأخذ نمطا مربعا، ولحماية أشجار التفاح من الرياح قام المزارع بزراعة أشجار الصنوبر حول البستان. المخطط التالي يوضح الموقف السابق، حيث يمكنك رؤية النمط الذي اتخذته أشجار التفاح و أشجار الصنوبر لعدد (n) من صفوف أشجار التفاح:
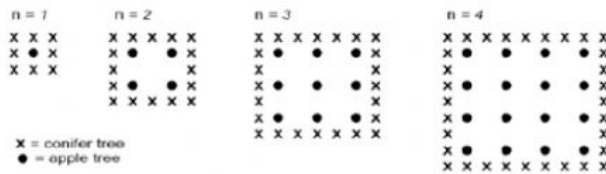

x = أشجار الصنوبر

● = أشجار التفاح

السؤال .

أكمل الجدول التالي:

عدد أشجار الصنوبر	عدد أشجار التفاح	N
8	1	1
	4	2
		3
		4
		5

_____

A farmer plants apple trees in a square pattern. In order to protect the apple trees against the wind he plants conifer trees all around the orchard.
Here you see a diagram of this situation where you can see the pattern of apple trees and conifer trees for any number (n) of rows of apple trees:

x = conifer tree
● = apple tree

Complete the table:

N	Number of apple trees	Number of conifer trees
1	1	8
2	4	
3		
4		
5		

Grade	11	Skills	Formulate	
Difficulty level	Easy	Question	التفاح	9
			The apple	

2) There are two formulae you can use to calculate the number of apple trees and the number of conifer trees for the pattern described above:

Number of apple trees = n^2

Number of conifer trees = $8n$

where n is the number of rows of apple trees.

There is a value of n for which the number of apple trees equals the number of conifer

trees. Find the value of n and show your method of calculating this.

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Grade	11	Skills	Formulate	
Difficulty level	Medium	Question	التفاح	10
			The apple	

افترض أن المزارع يريد توسعة البستان بشكل كبير وذلك بالعديد من صفوف الأشجار، إذا عمل المزارع على توسعة

البستان، فأيهما سوف يزداد بشكل أسرع: عدد أشجار التفاح أم عدد أشجار الصنوبر؟ اشرح طريقة الحل.

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Suppose the farmer wants to make a much larger orchard with many rows of trees. As the

farmer makes the orchard bigger, which will increase more quickly: the number of apple

trees or the number of conifer trees? Explain how you found your answer.

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