Data interpretation& data sufficiency

Drill 1: Solutions

Exercise 1

a. *Answer:* 2009

Explanation:

Deals with the year. So, row total. [*The 000 can be ignored*]

Sum can be approximated, so the total sale is greatest in the year **2009.**

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b. *Answer:* Jasmine.

Explanation:

We should look at column values.
From the column values its evident jasmine recorded a continuous decrease in sales during the given period.
Ans: Jasmine.

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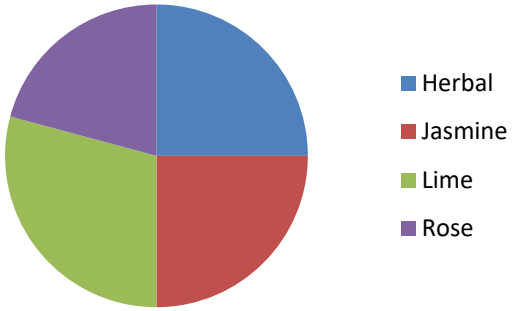
c. *Answer:* 15000

Explanation:

No of Lime fragrance soap sold in 2010 = 105000
No of Lime fragrance soap sold in 2011 = 90000
Difference = **15000**

Drill 2



a. *Answer:* 20.83%

Explanation:

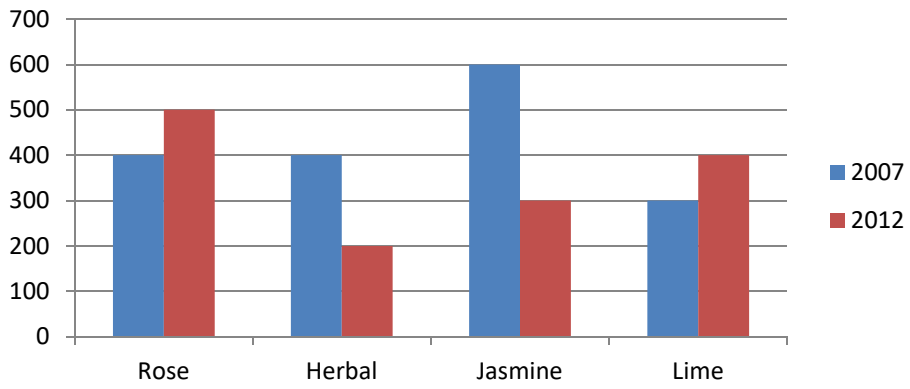
Sales of rose	=	75° out of 360°
	=	(75°/360°)
In percentage,	=	(75/360) x 100
	=	125/6
	=	**20.83%**

b. *Answer:* 16.66%

Explanation:

Sale of lime fragrance soap	=	105°
Sale of herbal fragrance soap	=	90°
Lime is compared with herbal	⇒	Base value is herbal.
% change	=	[(Compared value-Base Value)/Base Value] x 100
	=	(15/90) x 100
	=	**16.66%**

DRILL 3:



a. *Answer:* 11.11%

Explanation:

Percentage Increase	=	[(Final value-Initial value)/Initial value] x 100
So percentage Increase will be of rose fragrance soap in 2012	=	[(500-450)/450] x 100
	=	(50/450) x 100
	=	**11.11%**

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b. *Answer:* 325

Explanation:

Average	=	Sum/n
Sum of soaps sold in 2012	=	500+200+250+350
	=	1300
Number of fragrances	=	4
So the average sales	=	1300/4
	=	**325**

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c. *Answer:* Jasmine

Explanation:

Let us calculate the value of percentage change for each of the fragrances for the years 2012 from 2007.

Percentage Increase	=[(Final value-Initial value)/Initial value] x 100
Percentage change for Rose fragrance	= [(500-450)/450] x 100 =11.11%
Percentage change for herbal fragrance	= [(400-200)/400] x 100 = 50%
Percentage change for jasmine fragrance	= [(600-250)/600] x 100 = [350/600] x 100 = 58.33%
Percentage change for Lime fragrance	= (350-250)/250 x 100 = 40%
Highest percentage change	=58.33% [Jasmine]

Ans: Jasmine.

Drill 4:

a. *Answer:* Option (e)

Explanation:

Statement (i):
We do not know the number of pencils in a box. So statement (i) alone does not answer the question.

Statement (ii):
This tells us only the number of pencils Rakesh lends and not the number he has. So, statement (ii) alone also does not answer the question.

Combining both the statements will also not help us arrive at a conclusion.
Ans: Option (e)

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b. *Answer:* Option (b)

Explanation:

Statement (i):
It gives us the possibility of other two weights being equal (17.5kg each). So statement (i) alone does not answer the question.

Statement (ii):
This tells us that one of the packages weighs 25kg, so the combined weights of other two must be 25kg. So, the second package is the heaviest and statement (ii) alone is sufficient to answer the question.
Ans: Option (b)

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c. *Answer:* option (e)

Explanation:

Statement (i):
Taking statement (i) alone into consideration, food can be ha, na, pa or ta as we cannot map the English words to the Jhu Jhu coding system accurately. So statement (i) alone does not answer the question.

Statement (ii):
In this statement, food can mean ha, na, ja or pa. So, statement (ii) alone also does not answer the question.

When we combine both the statements, the words “eat,” “healthy”,” food” is common. The common codes are “na”, “ha”and “pa”. So we cannot find the specific code for “food”.
Ans: Option (e)

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d. Answer: option (c)

Explanation:

Statement (i):
Taking statement (i) alone into consideration we cannot map the English word “enjoy” to the Jhu Jhu coding system accurately. So statement (i) alone does not answer the question.

Statement (ii):
In the statement (ii) enjoy can mean ha, na, ja or pa. So, statement (ii) alone also does not answer the question.

When we combine both the statements, the words “eat”, “healthy”,” food” is common. The common codes are “na”, “ha”and “pa”. So we can say that, the specific code for “enjoy” as “ja”.
Ans: Option (c)

Googly Questions

1. Answer: Wrong

Explanation:
Data 1:
x is an even number
It is an even number and ‘2’ is the only even prime number and it is not a two digit number. So, first data alone is sufficient to say that x is not a prime number.
But there is a possibility that it may be option ‘D’. Hence it is always necessary to check the other data also.

Data 2:
It violates the rule of prime number. Prime numbers are divisible by only one and the number itself. All the 2 digit prime numbers are odd numbers and they can be divisible by 1 and the number itself.
Therefore first statement alone is sufficient and the answer is (A). The question’s answer is correct but the explanation is **wrong**.

2. *Answer: Wrong*

Explanation:

Using 1st data, value of b is unknown.

Using 2nd data alone, we can find b =20a. From which the percentage of a in b can be found easily and it is direct. Hence statement 2 alone is sufficient to find the percentage of a in b. So, the given explanation is **wrong**.

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3. *Answer: Wrong*

Explanation:

Two distinct integers and their product is 30

Checking option A:
First statement:
x is an odd integer.
It is given only four possibilities. But the possibilities include negative term also. They are 1 x 30, 2 x 15, 3 x 10, 5 x 6, 6 x 5, 10 x 3, 15 x 2, 30 x 1, (-1) x (-30), (-2) x (-15),....
x is an odd integer but there are many possibilities. Hence that is not the answer.

Second statement:
It has taken only x = 15 because all the negative terms are not considered.
So, the values of x and y cannot be found as multiple values of x are possible and the explanation is **Wrong**.
So the correct answer will be option (e).

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4. *Answer: Wrong*

Explanation:

Percentage increase in steel production in 2012 over 2010

Steel production in 2010	=	85
Steel production in 2012	=	100
Percentage increase	=	[(compared value-base value)/base value] x 100
Compared Value	=	100, base value = 85.
It must be [(100-85)/85] x 100	=	17.65%

So, it's **wrong.**

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5. *Answer: Wrong*

Explanation**:**

Average Annual increase	= [Production (2013) – Production (2010)]/No of years
Production in (2013)	= 115
Production in (2010)	= 85

No of years = 4
Average Annual Increase = (115-85)/4 = 30/4 = 7.5
Also the production is in million tons, but it is multiplied by 10 million tons which is wrong.
The answer must have been 7.5 Million Tons.
Hence the explanation given is **wrong.**

Concept Review Question

1. *Answer:* option a
   Explanation:
   Target production in 1994-95 = 200(Approx.)
   Target production in 1995-96 = 250(Approx.)
   Percentage change in the targeted production = [(Final value-initial value)/initial value] x 100
   = [(250-200)/200] x 100 = 25 %(Approx.)
   From options answer is **25.36%**

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2. *Answer:* Option c
   Explanation:
   Year 1992-93 can be ignored as target production is higher than actual production. So that will not be higher.
   1991-92 =200/150 = 1.33
   1993-94 =175/125 =1.4
   1994-95 =75/200 =1.34
   So highest was in **1993-94**

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3. *Answer:* **1.4 : 1**
   Explanation:
   Sum of target production =300+250+225 =775
   Sum of Actual production =225+200+125 =550
   Ratio of Target to actual production=775/550 =1.4:1(Answer is not in the option)

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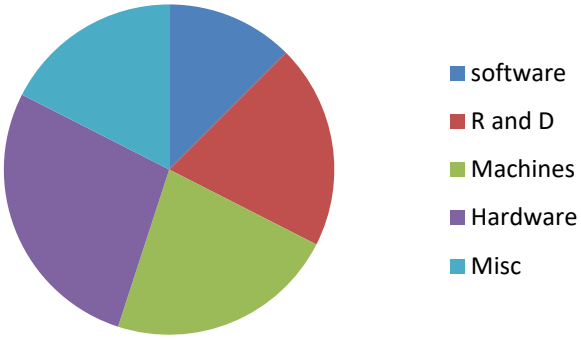
4. *Answer:* option b
   Explanation: (for Questions 4 to 9)



The marked price of a calculator is 24% more than its cost price. If the marked price of a calculator be Rs.186.Then what is the cost of R and D used in a single unit of calculator?
Marked price is 24% more than CP
W.K.T S.P = C.P x (124/100) =186
C.P = 150
Question is cost of R and D
W.K.T R&D contributes 20%
100% of price=> 150
20% of price => **30**.

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5. *Answer:* option a
Explanation:
W.K.T machinery charges contributes 22.5%
So 22.5% of prices =>58.5
Then what is 100%?
58.5/22.5 gives 1 %
So, 58.5/22.5 x 100 gives 100%
Which is equal to 260?
So CP is 260
MP is 30% more than CP
30% of 260 = 78
So MP = 260+78 = **338**

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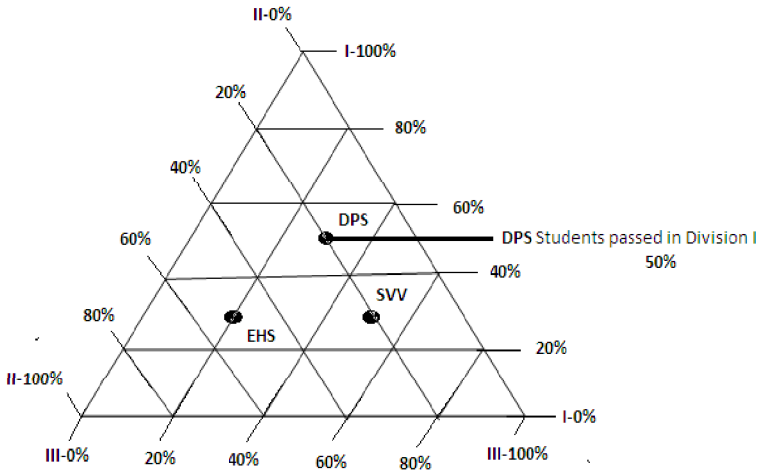
6. *Answer:* option c
Explanation:
SP => 192
P% =>20%
CP =>?
SP = CP x [(100+P)/100]
192 = CP x (120/100)
CP = Rs.160
Miscellaneous charges are 17.5% of CP
Also 17.5% of 160 = 28
So amount spent on miscellaneous charges is Rs. **28.**

7. *Answer:* option d
Explanation:
R and D Contributes => 20%
Machinery Contributes = 22.5%
= 42.5%
So 42.5% of CP = 127.5
100% of CP = 127.50/42.5 x 100
CP of calculator = 300.

8. *Answer:* option a
Explanation: (For questions 8 to 10)



Class /School	EHS (500)	DPS (750)	SVV (470)
I	30% (150)	50%(375)	30%(141)
II	50% (250)	20%(150)	20% (94)
III	20% (100)	30%(225)	50% (235)

Total number of students passing in division 3 from all three schools = 100+225+235 = **560**

9. *Answer:* option c
Explanation:
Total number of students in 2nd Division = 250+150+84

= 484
Total number of students in all three schools = 500+750+470 = 1720
Required percentage → (484/1720) x 100 = 4840/172=**28.7%**

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10. *Answer:* option d
Explanation:
Number of students passing in 2nd division from DPS → 150
Number of students passing in 3rd division from SVV → 235
Therefore the required ratio = 150: 235
= **30: 47**

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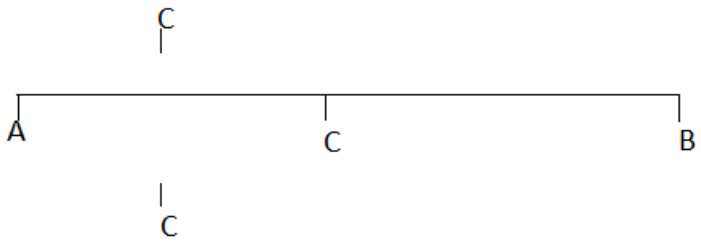
11. *Answer:* option e
Explanation:
The first statement talks about city A and B, but not about city C.
The second statement talks about city B and city C, but not about city A.
Combining both the statements, we know cities can be anywhere.



In this diagram, city C can be at any place, so the answer is not clear even if the statements are combined.

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12. *Answer:* option b
Explanation:
Using the first statement alone, the integers can be "0,1,2,3,4", "-2,-1,0,1,2", "-1,0,1,2,3".
Using the second statement alone, we know that the integers can only be -2,-1, 0, 1, and 2 as the arithmetic mean must be zero.
Statement 2 alone is sufficient to answer the Question.

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13. *Answer:* option e
Explanation:
Using statement (i), we know that john does not go to Jefferson High School as the students take French. Statement (ii) tells us that John may study in Maysville high School as it offers Chinese, but he might also study in some other school that offers Chinese.

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14. *Answer:* option d
Explanation:
Statement (i) tells us the relationship among D, A and C only. (D>A&C)
Statement (ii) brings the rest of the characters into the picture. (E>B>D>A&C)
Combining both the statements, we know that the tallest person is E.

15. *Answer:* option b
Explanation:
Using the first statement, we know that two pieces are of the same length. If two pieces are 1 foot each, then the third piece will be 4 feet and it will be the longest, but if they are 2 feet each, the third piece will also be 2feet. So here we cannot arrive at a conclusion.
With the help of the second statement alone we know that one piece is 3 feet 2 inches long, so the other two pieces put together must be 2 feet 10inches.So it is obvious that statement two gives us the length of the longest piece

16. *Answer:* option e
Explanation:
The two statements given don't mention anything about effective opposition.

17. *Answer:* option c
Explanation:
Statement 1 or 2 alone is not sufficient to answer the question.
Combining both the statements we will get
R=V=K;
V+K+A = 32
A=V+K
On solving these equations, we will get the age of Raju.

18. *Answer:* option e
Explanation:
From the two statements given we don't know whether Sreedhar is an employee or a stranger to ensure he is eligible for the pass.

19. *Answer:* option c
Explanation:
From statement 1, A = 1006 + B
B = 1213+C
From statement 2, A+B+C = 15,414
On solving these equations, we will get the solution.

20. *Answer:* option e
Explanation:
Since only the ceiling and floor measurement is given. We can't estimate the wall papers required to cover the walls since dimensions of wall is not given.