SMART Document Camera

13.

P(Pass History and fail Bio) OR P(Fail History and Pass Bio)

(0.8 x 0.4) + (0.2 x 0.6)

(0.32 + 0.12

0.44

44%

Probability Review

1. Match the potential probability with the event:

Event:	Percent:
• The sun will rise tomorrow.	❖ 0.35
• I'm bringing my dog to school tomorrow.	❖ 0
• You will have a quiz in one of your classes tomorrow.	❖ 100
	❖ 120

Answer the following questions using the following information:

The odds in favour of someone getting suspended today is 3:7.

2. What are the odds against someone getting suspended?
3. What is the probability of someone getting suspended?
4. What is the probability of someone not getting suspended?

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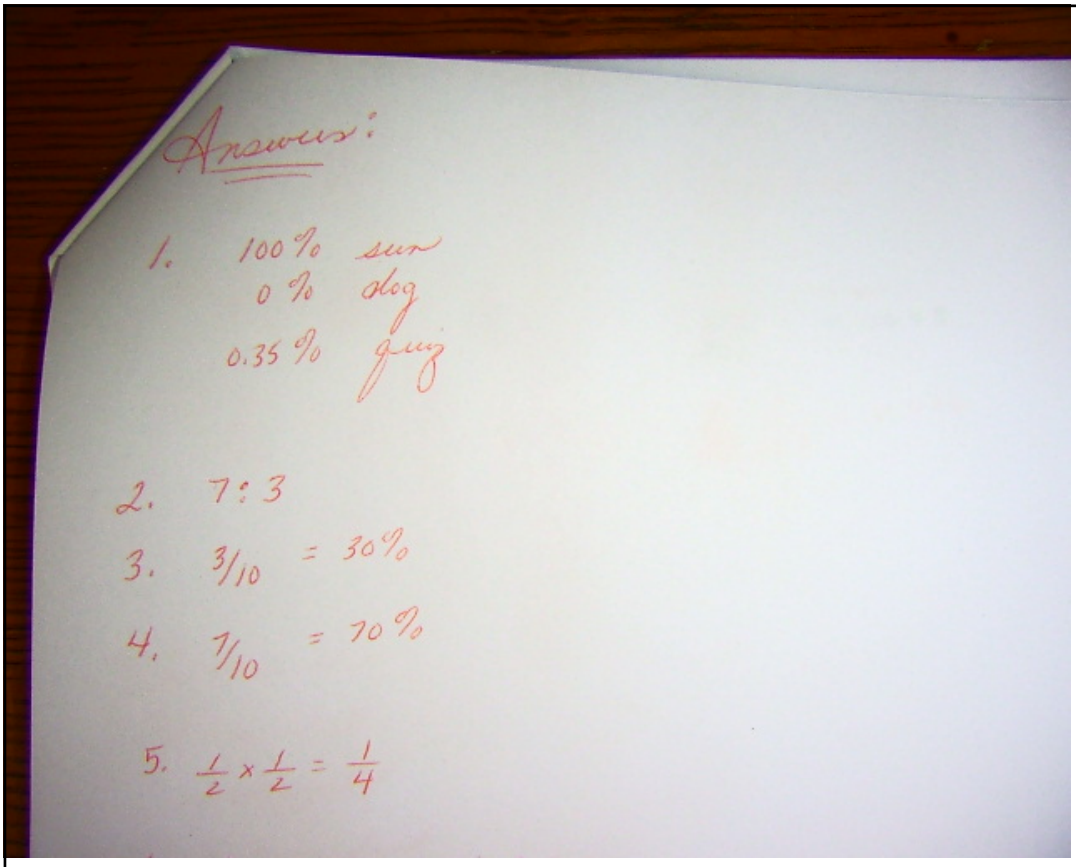
5. You toss two coins, what is the probability of getting two heads's?
6.
   a) Make an outcome table for rolling two dice.
   b) What is the probability of rolling doubles ?
   c) What is the probability of rolling doubles or a sum of five?
   d) What is the probability of rolling a sum less than 7?
7. You draw two cards from a deck of well shuffled cards.
   a) What is the probability of choosing two hearts?
   b) What is the probability of choosing two sevens?
   c) What is the probability of choosing a 7 and a 3?

8. Identify if the events are dependent or independent:
   - Tossing heads and rolling a 6 on a die
   - Choosing two cards and getting hearts and spades
   - Getting a heart and a 6 when choosing two cards from a standard deck of cards with replacement
   - Tossing two coins and getting two heads
9. There are 35 coloured marbles in a box, 10 red, 15 blue, 6 green, and 4 yellow.
   a) What is the probability of choosing a red and blue marble with replacement?
   b) Determine the probability of choosing two yellow marbles without replacement.
   c) What is the probability of choosing three blue without replacement?
   d) What is the probability of choosing a two green and one blue marble with replacement?
   e) You choose one marble. What is the probability of choosing a yellow or green?
10. You are playing twister with a friend. If you spin a four-coloured spiner,(red, green, blue, purple) what is the probability you will spin red?
11. Pam remembers to set her alarm clock 75% of the time. When she does remember the probability that she will be late for school is 0.31. When she does not remember the probability she will late for school is 4/5. Pam was on time today. What is the probability that she forgot to set her alarm? Please use a tree diagram.
12. There are 147 graduates. Of these 90 people ordered a baseball T, and 30 people ordered a hoodie. If 15 ordered both...
    a) Draw a Venn diagram and label each of the sets.
    b) P(baseball T)
    c) P(not a hoodie)
    d) P(hoodie and baseball T)
    e) P(neither baseball T nor hoodie)
13. The probability of passing history is 0.8 and the probability of failing biology is 0.4. If a student takes both courses at the same time what is probability of passing one and failing one?



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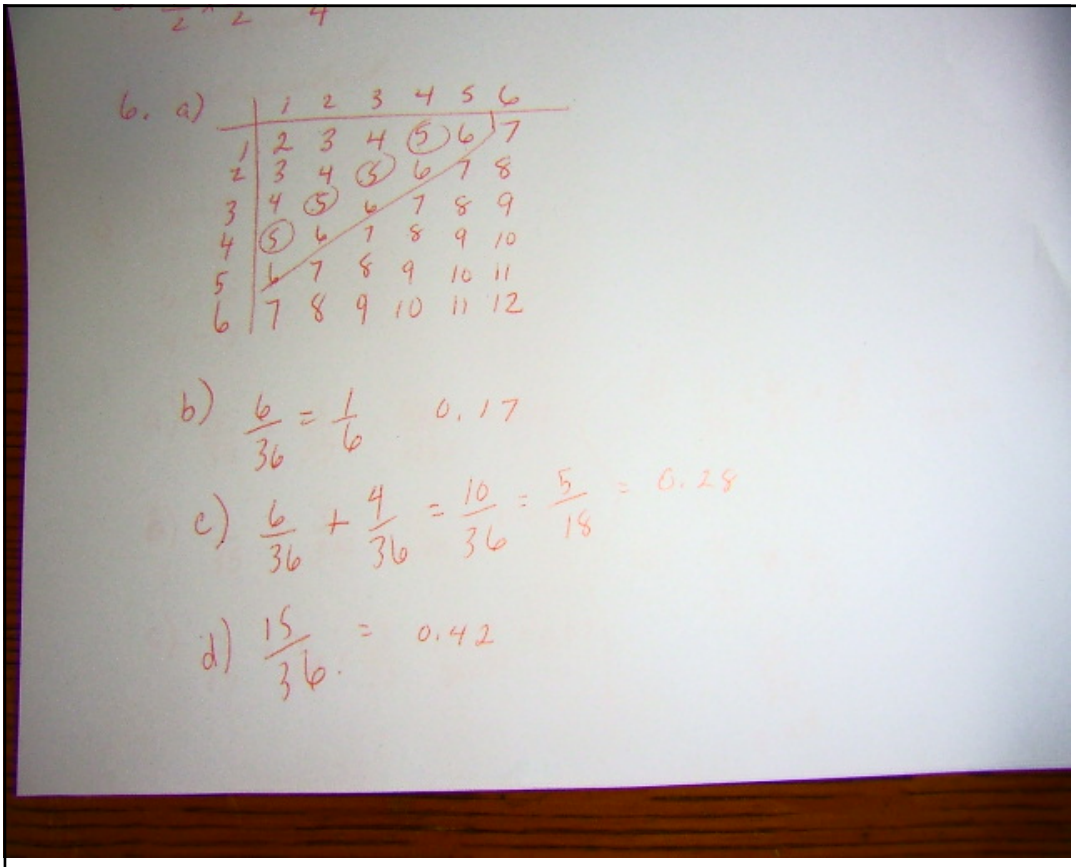


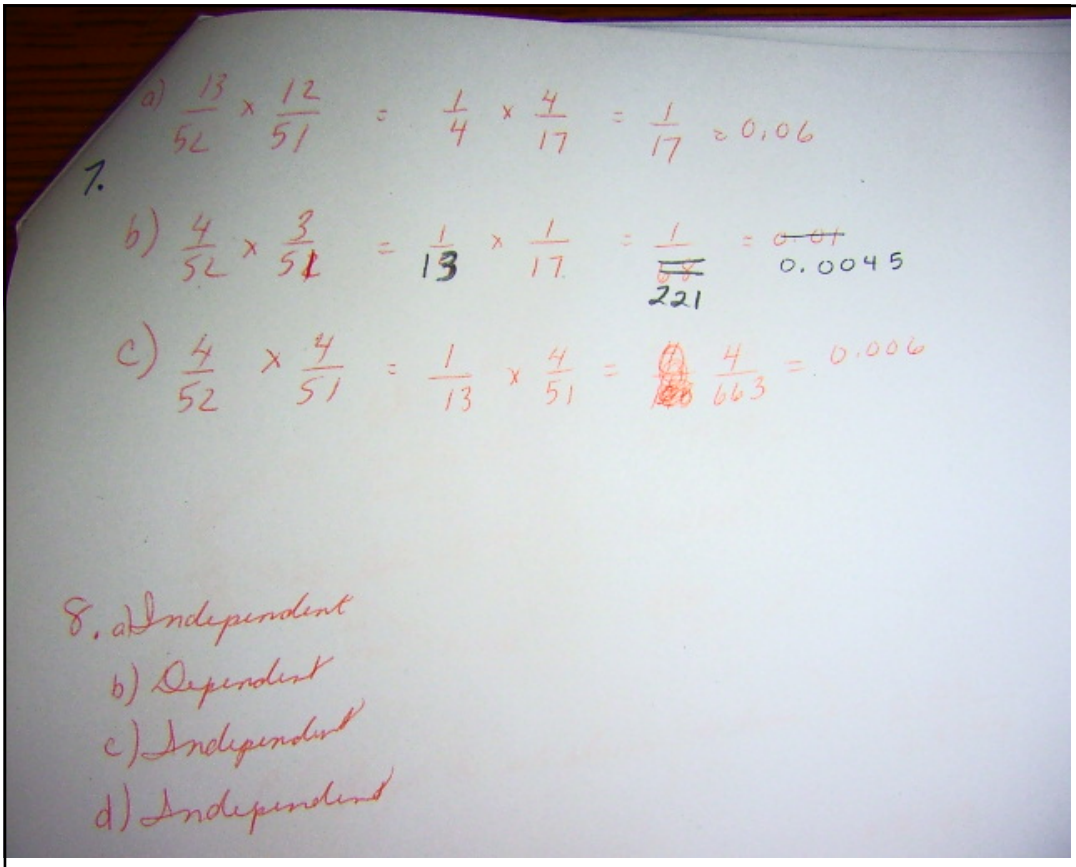
6. a)

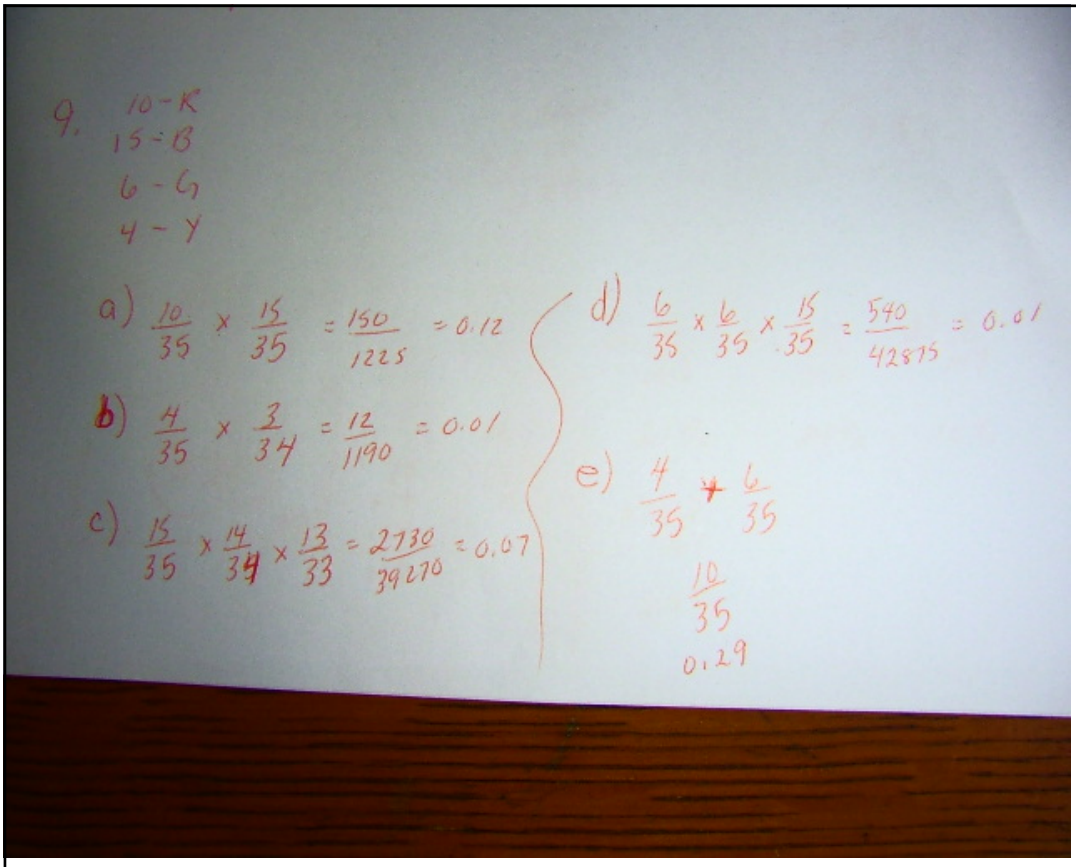
	1	2	3	4	5	6
1	2	3	4	(5)	6	7
2	3	4	(5)	6	7	8
3	4	(5)	6	7	8	9
4	(5)	6	7	8	9	10
5	6	7	8	9	10	11
6	7	8	9	10	11	12

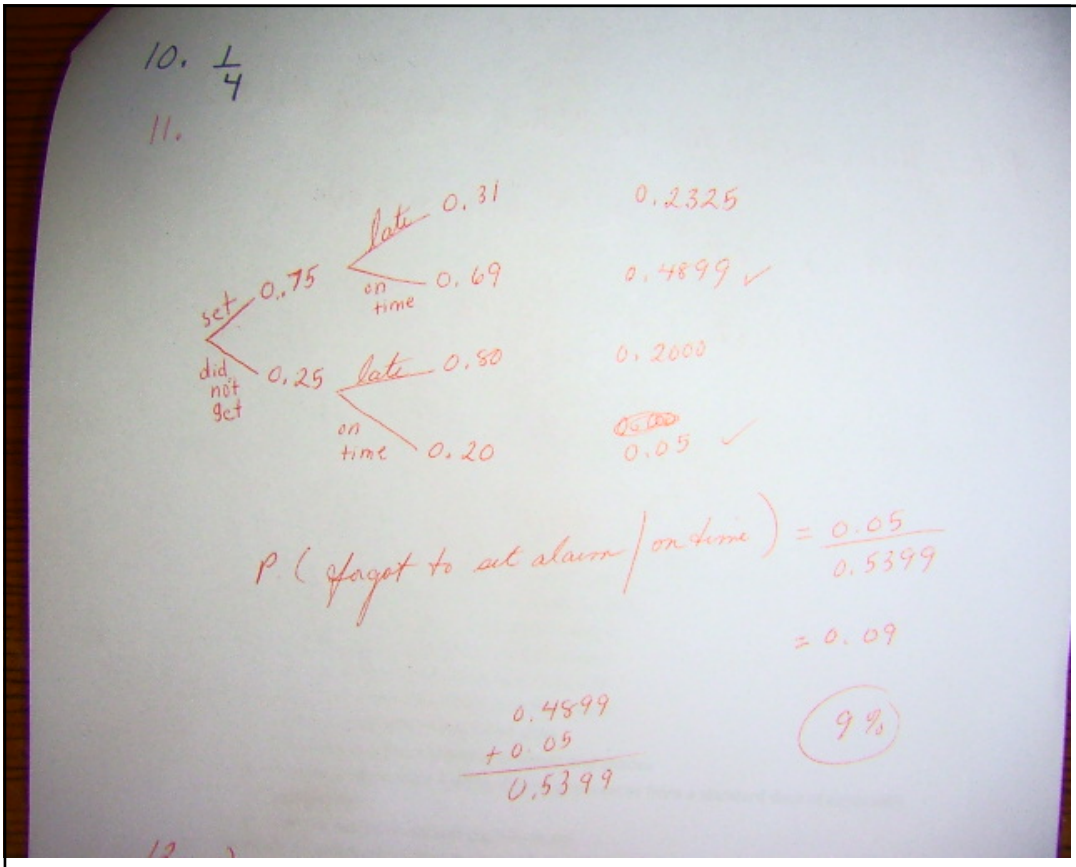
b) $\frac{6}{36} = \frac{1}{6}$ 0.17

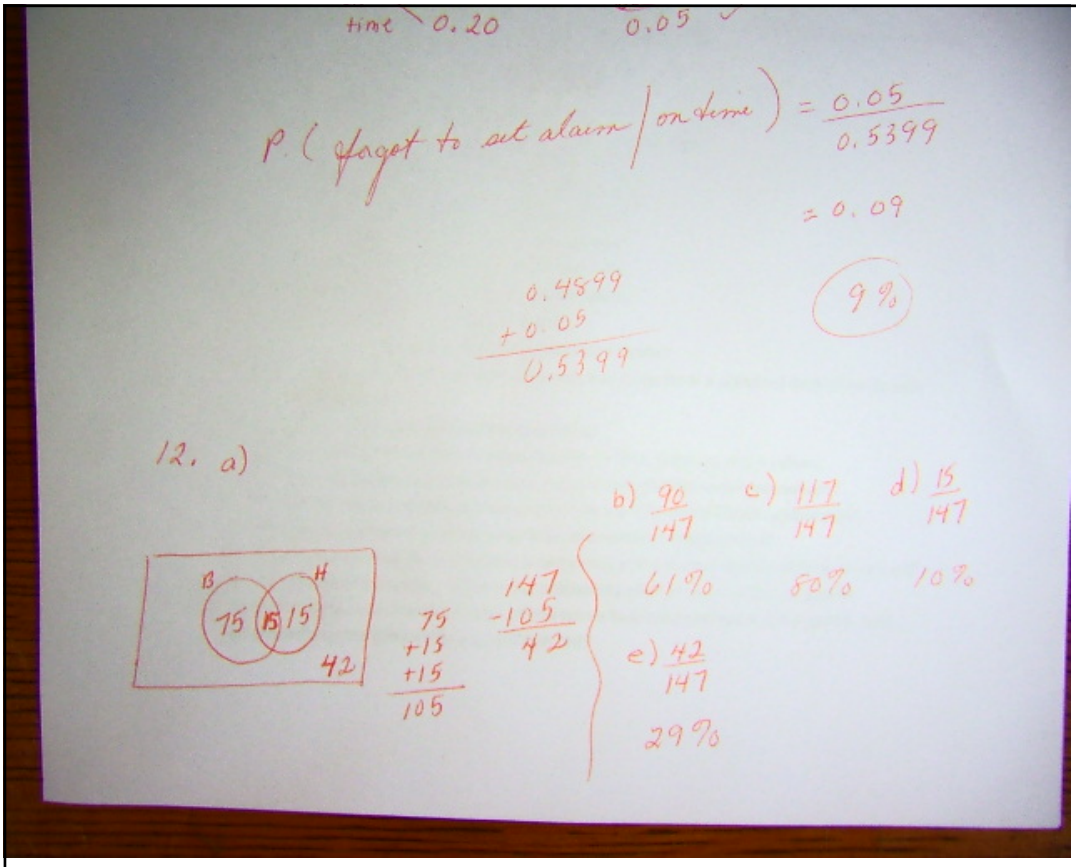
c) $\frac{6}{36} + \frac{4}{36} = \frac{10}{36} = \frac{5}{18}$ = 0.28

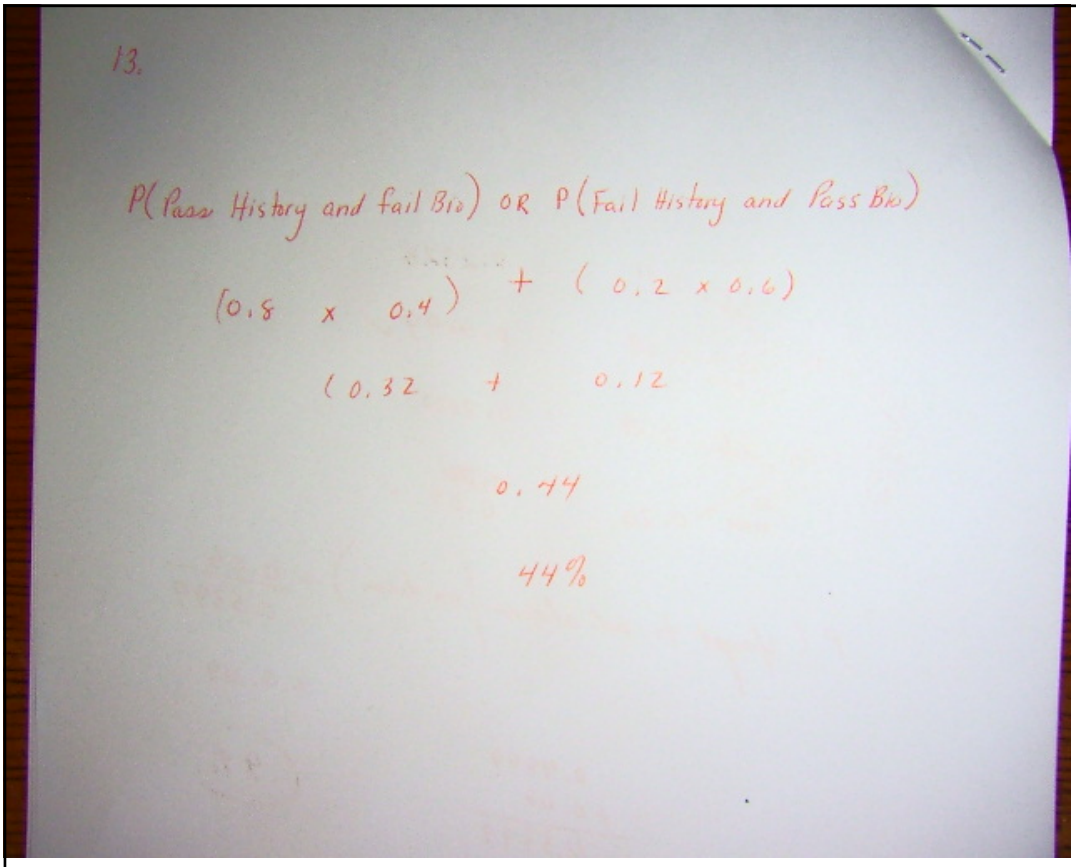
d) $\frac{15}{36}$ = 0.42


7.
a) 13/52 x 12/51 = 1/4 x 4/17 = 1/17 = 0.06
b) 4/52 x 3/51 = 1/13 x 1/17 = 1/221 = 0.0045
c) 4/52 x 4/51 = 1/13 x 4/51 = 4/663 = 0.006
8. a) Independent
b) Dependent
c) Independent
d) Independent


9.
10 - K
15 - B
6 - G
4 - Y
a) 10/35 x 15/35 = 150/1225 = 0.12
b) 4/35 x 3/34 = 12/1190 = 0.01
c) 15/35 x 14/34 x 13/33 = 2730/39270 = 0.07
d) 6/35 x 6/35 x 15/35 = 540/42875 = 0.01
e) 4/35 + 6/35
10/35
0.29


10. 1/4
11.
set
0.75
late
0.31
0.2325
on time
0.69
0.4899 ✓
did not set
0.25
late
0.80
0.2000
on time
0.20
0.05 ✓
P(forgot to set alarm | on time) = 0.05 / 0.5399
= 0.09
0.4899
+0.05
0.5399
9%


time \ 0.20
0.05
P(forget to set alarm | on time) = 0.05 / 0.5399
= 0.09
0.4899
+0.05
0.5399
9%
12. a)
B
H
75
15
15
42
75
+15
+15
105
147
-105
42
b) 90/147
61%
c) 117/147
80%
d) 15/147
10%
e) 42/147
29%



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