Long Test 2 After Midterm

Instructions: Read each question carefully and show your solutions as much as possible.

Write your final answer in 2 decimal places, if possible. Send photos of your solution to my personal line.

1.Two cards are picked from a standard deck of 52 cards without replacement. What is the probability that both cards are diamonds?

A. 0.05 B. 0.06 C. 0.07 D. 0.08

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2. Marie flips a biased coin. The probability that she gets two heads is 0.16. What is the probability that she gets two tails?

A. 0.16 B. 0.25 C. 0.36 D. 0.64

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3.Inside a box are number cards with numbers 1 to 20 written on them. A card is drawn at random. What is the probability that the number picked is either a multiple of 5 or an even number?

A. 0.50 B. 0.55 C. 0.60 D. 0.65

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4. Nathan runs a game at a fair. To play the game, you roll a die and pick a card from a deck.

To win the game you must roll an odd number and pick a picture card (J, Q, K).

Nathan charges 1 baht to play and gives 3 baht to any winners.

If 260 people play the game, how much profit would Nathan expect to make?

A. 110 baht B. 130 baht C. 150 baht D. 170 baht

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5.A coin is tossed three times. What is the probability of getting exactly two heads?

A. 0.25 B. 0.33 C. 0.38 D. 0.50

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6. 200 people were asked which athletics event they thought was the most exciting.

| Gender | 100m | Long Jump | Swimming |
|---|---|---|---|
| Male | 56 | 30 | 24 |
| Female | 32 | 29 | 29 |

A person is chosen at random.

Given that the person chose 100m, what is the probability that the person is female?

A. 0.30 B. 0.32 C. 0.36 D. 0.40

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7.Sam asked 50 people whether they like vegetable pizza or pepperoni pizza.

- 37 people like vegetable pizza
- 25 people like both
- 3 people like neither

Sam randomly chooses one person.

Given that the person likes pepperoni pizza, what is the probability that they do NOT like vegetable pizza?

A. 0.20 B. 0.28 C. 0.32 D. 0.40

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8. There are 12 marbles in a bag.

There are x red marbles and the rest are blue.

Ana picks two marbles without replacement.

What is the probability that she picks 1 red marble and 1 blue marble?

A. $\frac{x(12-x)}{66}$

B. $\frac{x(12-x)}{132}$

C. $\frac{2x(12 \quad x)}{66}$

D. $\frac{2x(12 \quad x)}{132}$

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9.Bea has 18 candies in a jar.

- 10 plain
- 6 chocolate
- 2 orange

She randomly picks 2 candies.

What is the probability that the two candies are different kinds?

A. 0.50 B. 0.55 C. 0.60 D. 0.65

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10. There are 7 tiles in a bag with the letters:

P, O, L, Y, G, O, N

A tile is selected, replaced, and then another tile is selected.

What is the probability that the two tiles have different letters?

A. 0.84 B. 0.88 C. 0.90 D. 0.92