The Urine Clues

Use simulated test strips to compare patient samples.

HAP.14.4 "Enrichment: Conduct a urinalysis to compare the composition of urine from various "patients.""

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline the two color-to-result rules in paragraph 2. Then circle the glucose and protein pad colors for patients A, B, and C in the table so you can test each sample.

A Lab with Four Samples

1. A clinic wants to compare urine samples from three patients. In this paper simulation, no real urine or test strips are needed. Each row in the table shows what two test pads looked like after contact with a sample. One pad tests for glucose, a sugar. The other tests for protein. A water control helps show whether the test pads are working as expected.

2. Use this color key to read the pads: a yellow glucose pad means negative, while a green glucose pad means positive. A pale yellow protein pad means negative, while a blue protein pad means positive. Read each pad separately, even when both pads come from the same sample. The water control should read negative on both pads.

OBSERVED PAD COLORS

Sample	Glucose pad	Protein pad
Water control	Yellow	Pale yellow
Patient A	Green	Pale yellow
Patient B	Yellow	Blue
Patient C	Green	Blue

3. To conduct the simulated test, first check the control against the color key. If either control pad reads positive, the batch is unreliable. Next, convert each patient's pad colors into positive or negative results and record them. Compare patients by looking at both results, not just one. A positive result is a finding to investigate, not a diagnosis by itself.

2 ANSWER WITH EVIDENCE

Use the passage

1. Do the water control's pad colors show that this batch can be used? Explain using both results.

2. Which test is positive for patient A, and which is negative?

3. Which test is positive for patient B, and which is negative?

4. How do the test results for patients A and B differ?

3 YOUR TURN

Your own words

Conduct a paper urinalysis: use the color key to record both test results for all four samples in the table, starting with the control. Then write two sentences comparing patient C with A and B and naming one appropriate next step for interpreting C's results.

SAMPLE	GLUCOSE RESULT	PROTEIN RESULT

The Urine Clues

PART 1 · READ AND MARK

Underline the two color-to-result rules in paragraph 2. Then circle the glucose and protein pad colors for patients A, B, and C in the table so you can test each sample. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	Do the water control's pad colors show that this batch can be used? Explain using both results.	**Yes. The yellow glucose pad and pale yellow protein pad both read negative, as expected for the water control.**
2	Which test is positive for patient A, and which is negative?	**Glucose is positive; protein is negative.**
3	Which test is positive for patient B, and which is negative?	**Protein is positive; glucose is negative.**
4	How do the test results for patients A and B differ?	**A is positive for glucose and negative for protein. B is negative for glucose and positive for protein.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

Water control | Negative | Negative
Patient A | Positive | Negative
Patient B | Negative | Positive
Patient C | Positive | Positive
Patient C shares A's positive glucose result and B's positive protein result. A clinician could repeat C's tests before drawing a conclusion.

Accept equivalent comparisons that identify C as positive for both tests. Appropriate next steps include repeating the tests or seeking clinical evaluation; do not treat a positive pad as a diagnosis.