

Coding and Decoding

In this code each letter becomes the next letter. After Z comes A.

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Write each word in the code.

1. **C A T** → **D B U**

Example

2. **D O G** →

3. **S U N** →

4. **F R O G** →

5. **Z O O** →

Decode each secret word.

6. **I B U** →

7. **C J S E** →

8. **N P P O** →

9. **T U B S** →

10. **G J T I** →

Coding and Decoding

Find the code. Write the letter of the right answer.

1. If CAT is written DBU, how is PIG written?

Example

- a) QJH b) OHF
c) QJI d) GIP

2. If DOG is written CNF, how is RAT written?

- a) SBU b) QZS
c) TAR d) QZT

3. If BOX is written DQZ, how is CUP written?

- a) DVQ b) AST
c) EWR d) EWQ

4. If PEN is written NEP, how is CUP written?

- a) DVQ b) UPC
c) CPU d) PUC

5. If HAT is written IBU, which word is written EPH?

- a) FOG b) DOG
c) DIG d) COG

6. If LION is written MJPO, which word is written CFBS?

- a) DEER b) BEAD
c) BEAR d) BARE

7. If TOP is written POT, how is STAR written?

- a) TSRA b) ARTS
c) UTBS d) RATS

8. If ANT is written ZMS, how is BEE written?

- a) ADD b) CFF
c) ADE d) EEB

Coding and Decoding

Use the number code: A = 1, B = 2, and so on to Z = 26.

A 1	B 2	C 3	D 4	E 5	F 6	G 7	H 8	I 9	J 10	K 11	L 12	M 13
N 14	O 15	P 16	Q 17	R 18	S 19	T 20	U 21	V 22	W 23	X 24	Y 25	Z 26

A = 1 code

- If CAT is written 3 1 20, how is BEE written? Example 2 5 5
- If DOG is written 4 15 7, which word is 8 1 20? _____
- How is KITE written? _____
- Which word is 19 21 14? _____

Add the letters

- If CAT = 3 + 1 + 20 = 24, what does DOG equal? _____
- Which is worth more, HAT or PIG? _____

Work out the code

- In a code, TEA is 123 and ATE is 312. How is EAT written? _____
- In a code, MAT is 123 and TAP is 324. How is PAT written? _____
- In a code, ROSE is 6821 and CHAIR is 73456. How is SEARCH written? _____

Coding and Decoding

Two more codes: write it backward, and move two letters ahead.

Backward code: write the letters in the opposite order.

- | | | | | | | | | | | | | | |
|----|---|---|---|---|---|---|---|---|--|--|--|--|--|
| 1. | P | E | N | → | N | E | P | <div style="border: 1px solid green; border-radius: 10px; padding: 2px; display: inline-block;">Example</div> | | | | | |
| 2. | T | O | P | → | | | | | | | | | |
| 3. | S | T | A | R | → | | | | | | | | |
| 4. | N | O | W | → | | | | | | | | | |
| 5. | P | A | R | T | → | | | | | | | | |
| 6. | D | R | A | W | E | R | → | | | | | | |

Some words make a new word backward. Which ones did?

Two-ahead code: A becomes C, B becomes D. After Z comes B.

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

- | | | | | | | | | |
|----|---|---|---|---|---|---|---|---|
| 7. | A | N | T | → | C | P | V | <div style="border: 1px solid green; border-radius: 10px; padding: 2px; display: inline-block;">Example</div> |
| 8. | B | E | D | → | | | | |
| 9. | M | A | P | → | | | | |

Decode each secret word.

- | | | | | | | | | | |
|-----|---|---|---|---|---|--|--|--|--|
| 10. | J | Q | V | → | | | | | |
| 11. | E | C | T | V | → | | | | |
| 12. | I | Q | C | N | → | | | | |

Coding and Decoding

Word-swap codes, then find the rule of each code.

Word-swap codes

1. In a code, red means blue, blue means green, green means yellow, and yellow means white. What color is grass in this code?
2. In a code, cat means dog, dog means cow, cow means hen, and hen means duck. Which animal says moo in this code?
3. In a code, sky means sea, sea means sand, sand means tree, and tree means road. Where do fish swim in this code?
4. In a code, pen means book, book means bag, bag means chair, and chair means desk. What do you sit on in this code?

Example

yellow

Find the rule

Rules: one letter ahead, one letter back, two letters ahead, backward

5. FUN is GVO, BIG is CJH

Rule: _____

JAM is

6. MAP is PAM, TEN is NET

Rule: _____

DOG is

7. ART is CTV, BED is DGF

Rule: _____

ICE is

8. HOT is GNS, PIE is OHD

Rule: _____

TOY is

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Write each word in the code.

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→ D B U

Example

2. D O G

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4. F R O G

→

5. Z O O

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Decode each secret word.

6. I B U

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A = 1 code

1. If CAT is written 3 1 20, how is BEE written?

Example

2 5 5

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3. How is KITE written?

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Add the letters

5. If CAT = 3 + 1 + 20 = 24, what does DOG equal?

6. Which is worth more, HAT or PIG?

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7. In a code, TEA is 123 and ATE is 312. How is EAT written?

8. In a code, MAT is 123 and TAP is 324. How is PAT written?

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| 2. | T | O | P | → | | | | | | | | | |
| 3. | S | T | A | R | → | | | | | | | | |
| 4. | N | O | W | → | | | | | | | | | |
| 5. | P | A | R | T | → | | | | | | | | |
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- | | | | | | | | | |
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| 7. | A | N | T | → | C | P | V | <div style="border: 1px solid green; border-radius: 10px; padding: 2px; display: inline-block;">Example</div> |
| 8. | B | E | D | → | | | | |
| 9. | M | A | P | → | | | | |

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|-----|---|---|---|---|---|--|--|--|--|
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| 11. | E | C | T | V | → | | | | |
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Example

yellow

2. In a code, cat means dog, dog means cow, cow means hen, and hen means duck. Which animal says moo in this code?

3. In a code, sky means sea, sea means sand, sand means tree, and tree means road. Where do fish swim in this code?

4. In a code, pen means book, book means bag, bag means chair, and chair means desk. What do you sit on in this code?

Find the rule

Rules: one letter ahead, one letter back, two letters ahead, backward

5. **FUN is GVO, BIG is CJH**

Rule: _____

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6. **MAP is PAM, TEN is NET**

Rule: _____

DOG is

7. **ART is CTV, BED is DGF**

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| 1. | C | A | T | → | D | B | U | Example | | |
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| 3. | S | U | N | → | T | V | O | | | |
| 4. | F | R | O | G | → | G | S | | P | H |
| 5. | Z | O | O | → | A | P | P | | | |

Decode each secret word.

- | | | | | | | | | | |
|-----|---|---|---|---|---|---|---|---|---|
| 6. | I | B | U | → | H | A | T | | |
| 7. | C | J | S | E | → | B | I | R | D |
| 8. | N | P | P | O | → | M | O | O | N |
| 9. | T | U | B | S | → | S | T | A | R |
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Coding and Decoding

Find the code. Write the letter of the right answer.

1. If CAT is written DBU, how is PIG written?

a

Example

- a) **QJH** b) **OHF**
c) **QJI** d) **GIP**

2. If DOG is written CNF, how is RAT written?

b

- a) **SBU** b) **QZS**
c) **TAR** d) **QZT**

3. If BOX is written DQZ, how is CUP written?

c

- a) **DVQ** b) **AST**
c) **EWR** d) **EWQ**

4. If PEN is written NEP, how is CUP written?

d

- a) **DVQ** b) **UPC**
c) **CPU** d) **PUC**

5. If HAT is written IBU, which word is written EPH?

b

- a) **FOG** b) **DOG**
c) **DIG** d) **COG**

6. If LION is written MJPO, which word is written CFBS?

c

- a) **DEER** b) **BEAD**
c) **BEAR** d) **BARE**

7. If TOP is written POT, how is STAR written?

d

- a) **TSRA** b) **ARTS**
c) **UTBS** d) **RATS**

8. If ANT is written ZMS, how is BEE written?

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- a) **ADD** b) **CFF**
c) **ADE** d) **EEB**

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- How is KITE written? 11 9 20 5
- Which word is 19 21 14? SUN

Add the letters

- If CAT = 3 + 1 + 20 = 24, what does DOG equal? 26
- Which is worth more, HAT or PIG? PIG

Work out the code

- In a code, TEA is 123 and ATE is 312. How is EAT written? 231
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Coding and Decoding

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| 3. | S | T | A | R | → | R | A | | T | S | | | |
| 4. | N | O | W | → | W | O | N | | | | | | |
| 5. | P | A | R | T | → | T | R | | A | P | | | |
| 6. | D | R | A | W | E | R | → | | R | E | W | A | R |

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- | | | | | | | | | |
|----|---|---|---|---|---|---|---|---------|
| 7. | A | N | T | → | C | P | V | Example |
| 8. | B | E | D | → | D | G | F | |
| 9. | M | A | P | → | O | C | R | |

Decode each secret word.

- | | | | | | | | | | |
|-----|---|---|---|---|---|---|---|---|---|
| 10. | J | Q | V | → | H | O | T | | |
| 11. | E | C | T | V | → | C | A | R | T |
| 12. | I | Q | C | N | → | G | O | A | L |

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Example

yellow

hen

sand

desk

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Rule: one letter ahead

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K **B** **N**

6. MAP is PAM, TEN is NET

Rule: backward

DOG is

G **O** **D**

7. ART is CTV, BED is DGF

Rule: two letters ahead

ICE is

K **E** **G**

8. HOT is GNS, PIE is OHD

Rule: one letter back

TOY is

S **N** **X**