

Mathematics for Elementary School Teachers Chapter 1 - Form B
Name $\qquad$
MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.
Use the figure to answer the question.

1) This double-bar graph shows the number of male (M) and female (F) athletes at a university over a four-year period.


Which year had the greatest number of male athletes?
A) 2001
B) 2000
C) 2002
D) 2003

Use the circle graph to solve the problem.
2) In a school survey, students showed these preferences for instructional materials.


About how many students would you expect to prefer lectures in a school of 600 students?
A) About 120
B) About 108
C) About 216
D) About 18
2) $\qquad$

Indicate whether the sequence is arithmetic, geometric, or neither.
3) $4,16,64,256,1024, \ldots$
A) Arithmetic
B) Neither
C) Geometric

Decide whether the argument is an example of inductive or deductive reasoning.
4) Fresh fruit costs more in winter. This is January. These fresh strawberries cost more.
A) Inductive
B) Deductive

## Use inductive reasoning to predict the next number in the sequence.

5) $1,3,2,6,4,12, \ldots$
A) 6
B) 8
C) 18
D) 24

## Write the specified document.

6) Some investments are risky.

Real estate is an investment.
Therefore real estate is risky.
A) Not valid
B) Valid
7) Martians are green.

Roger is not green.
Therefore Roger is not a Martian.
A) Valid
B) Not valid

Determine the validity of the argument.
8) State the converse of the following: If you study hard, then your grades will be good.
A) If your grades are not good, then you did not study hard.
B) If your grades are good, then you studied hard.
C) If you do not study hard, then your grades will not be good.
D) If you study hard, then your grades will not be good.
9) State the inverse of the following:

If it is snowy, then it is cold.
A) If it is cold, then it is snowy.
B) If it is snowy, then it is not cold.
C) If it is not snowy, then it is not cold.
D) If it is not cold, then it is not snowy.

## Determine what the next equation would be.

10) $\begin{aligned}(1 \times 9)-4=5 \\ (21 \times 9)-4=185 \\ (321 \times 9)-4=2885\end{aligned}$
A) $(4321 \times 9)-4=38,885$
B) $(4321 \times 9)-4=3884$
C) $(4321 \times 9)-4=28,885$
D) $(432 \times 9)-4=38,885$

## Solve the problem.

11) If a person puts $2 \not \subset$ in a piggy bank on the first day, $4 \not \subset$ on the second day, $6 \not \subset$ on the third day, and so forth, how much money will be in the bank after 30 days?
A) $\$ 4.65$
B) $\$ 0.60$
C) $\$ 9.30$
D) $\$ 18.60$
12) A collection of dimes is arranged in a triangular array with 17 coins in the base row, 16 in the next, 15 in the next, and so forth. Find the value of the collection.
A) \$ 15.30
B) $\$ 7.65$
C) $\$ 30.60$
D) \$ 1.53
13) Three times the sum of Jim's and Tom's ages is equal to twelve times the difference of their ages, and three years ago Jim was twice as old as Tom was. How old is Tom now?
A) 9
B) 6
C) 15
D) 12
14) A child's coin bank contains $\$ 2.41$ in pennies and nickels. If the number of pennies is 23 less than 3 times the number of nickels, how many nickels are in the bank?
A) 304 nickels
B) 76 nickels
C) 109 nickels
D) 33 nickels
15) $\qquad$
16) $\qquad$
17) $\qquad$
18) $\qquad$
19) $\qquad$
20) $\qquad$
21) $\qquad$
22) $\qquad$
23) $\qquad$
24) $\qquad$
25) How many different ways can you make change for a 50 -cent coin using quarters, dimes, and nickels?
A) 8 ways
B) 10 ways
C) 11 ways
D) 9 ways
26) A shirt and tie together cost $\$ 73.90$. The shirt costs $\$ 18$ more than the tie. How much does the tie cost?
A) $\$ 27.95$
B) $\$ 45.95$
C) $\$ 63.95$
D) $\$ 9.95$
27) A rectangular field is to be enclosed with 640 ft of fencing. If the length of the field is 80 ft longer than the width, then how long is the field?
A) 160 ft
B) 120 ft
C) 240 ft
D) 200 ft

## Answer the question or solve the problem.

18) A pet shop has a total of 17 dogs and birds. Altogether there are 48 feet. How many dogs are there and how many birds?
A) 7 dogs and 10 birds
B) 9 dogs and 8 birds
C) 8 dogs and 9 birds
D) 6 dogs and 11 birds
19) Mr. Smith has 21 18-cent notebooks and 7 -cent pencils. The notebooks and pencils are worth \$ 2.46. How many notebooks and how many pencils does Mr. Smith have?
A) 9 notebooks and 12 pencils
B) 8 notebooks and 13 pencils
C) 10 notebooks and 11 pencils
D) 7 notebooks and 14 pencils
20) Who am I? If you multiply me by 6 and subtract 15 , the result is 177 .
21) $\qquad$
22) $\qquad$
A) 27
B) 32
C) 1047
D) 1077

Answer Key for Chapter 1 - Form B

1) $D$
2) $B$
3) B
4) B
5) C
6) C
7) $B$
8) A
9) A
10) A
11) C
12) A
13) A
14) D
15) B
16) A
17) D
18) A
19) A
20) B
