

Inductive Reasoning

Ser

Look for a pattern and predict the next two numbers in each sequence.

1. 1, 5, 9, 13, 17, 21
 $+4$ $+4$ $+4$ $+4$
2. 19, 17, 15, 13, _____, _____
3. 1, 3, 6, 10, _____, _____
4. 50, 45, 40, 35, _____, _____
5. 1, 3, 9, 27, _____, _____
6. 100, 50, 25, 12.5, 6.25, 3.125
 $\div 2$ $\div 2$ $\div 2$ $\div 2$ $\div 2$
7. 0, 1.25, 2.5, 3.75, _____, _____
8. $1, 3\frac{1}{2}, 6, 8\frac{1}{2}, \dots$
9. $1, \frac{99}{101}, \frac{97}{101}, \frac{95}{101}, \frac{93}{101}, \dots$
10. $1, \frac{49}{50}, \frac{24}{25}, \frac{47}{50}, \dots$
11. 81, -27, 9, -3, _____, _____
12. 15, -30, 60, -120, 240, -480
 $\times -2$ $\times -2$ $\times -2$ $\times -2$ $\times -2$
13. 80, 70, 61, 53, _____, _____
14. $\frac{1}{2}, 2, 8, 32, \dots$

Accept the two statements as given information. State a conclusion based on *deductive* reasoning. If no conclusion can be reached, write *none*.

15. Lynne is taller than Becky. $L > B > E$
 Becky is taller than Eddie.
Lynne is taller than Eddie
16. Polygon H has more than 5 sides.
 Polygon H has fewer than 7 sides.
Polygon H has 6 sides.
17. Al is faster than Frank.
 Cliff is faster than Frank.
none
18. All championship swimmers practice at least 3 hours a day.
 Anne practices 4 hours a day.

19. All good basketball players are over 6 feet tall.
 Bill is 6 feet 5 inches tall.

20. Sandra has won more than 9 tennis tournaments.
 Sandra has won fewer than 11 tennis tournaments.

21. All cows have four legs.
 Elsie has four legs.
none
22. Eric is younger than Barry.
 Amy is older than Eric.

23. All licensed drivers are more than 18 years old.
 Charles has a driver's license.

24. All turtles are reptiles.
 Timmy is a turtle.
Timmy is a reptile

Definitions:

Inductive Reasoning
base conclusion on
patterns or past
experience

Deductive Reasoning
make a series of
logical conclusions from
known facts
(proofs)
