

1.  a square with four corners shaded

2.  a six-sided figure with a six-sided figure inside it

3. Start with 100 and subtract 15 repeatedly; 40, 25

4. Start with 5 and multiply by 4 repeatedly; 1,280, 5,120

5. Start with 2 and add 5 repeatedly; 22, 27

6. Start with  $-10$  and add 6 repeatedly; 14, 20

7. Start with 1 and add 3 repeatedly; 13, 16

8. Start with 1 and alternately add 1 and 3; 10, 13

9. Answers may vary. Sample: No. Mario's catching a cold could be due to many different reasons.

10. Incorrect; an ostrich cannot fly.

11. correct

12. Incorrect;  $\frac{1}{2} \cdot \frac{1}{2} = \frac{1}{4}$ , which is less than  $\frac{1}{2}$ .

13.  an eight-sided figure with bottom right eighth shaded

14.  a square inside a circle inside a triangle inside a diamond

15. Start with 1 and add 0.5 repeatedly; 3.5, 4, 4.5

16. Start with  $-1$  and alternate between finding the opposite and the next negative integer.  $-4, 4, -5$

17. Start with 6 and add  $-2$  repeatedly;  $-2, -4, -6$

18. Incorrect; some have 4.
19. Incorrect; Counterexamples may vary:  $8 + (-6)$  is 2,  $2 < 8$ .
20. correct
21. Start with 1; multiply by 2 and then add 2, repeatedly; 190, 382, 766
22. Start with 1 and alternately subtract and add consecutive multiples of 3; 10, -11, 13
23. a. Answers may vary. Sample: The unemployment rate will decrease; it has decreased every year shown in the graph.  
b. Answers may vary. Sample: Look up unemployment records for 2001.