

Multiple choice answers "None of these" have correct answer listed in parenthesis.

Test A Solutions

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|------|--------------------------|------------------------------|
| 1. C | 10. $-4x + 8$ | 19. a. No, No |
| 2. A | 11. $x^2(x - 3)(3x - 1)$ | b. No, all multiples of 11. |
| 3. E | 12. $\frac{2}{x}$ | |
| 4. D | 13. 12 | 20. a. Fibonacci Numbers, |
| 5. D | 14. 3 | $f(1) = 1, f(2) = 2,$ |
| 6. C | 15. 7 | $f(n) = f(n - 1) + f(n - 2)$ |
| 7. D | 16. 306 | b. For a given n there are |
| 8. C | 17. 27 | $f(n - 1)$ numbers ending in |
| 9. A | 18. 28 | 1 and $f(n - 2)$ numbers |
| | | ending in 2. |

Test B Solutions

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|-----------|----------------------------|------------------------------|
| 1. A | 10. $\frac{2}{x}$ | 17. mod 8 leads to |
| 2. D | 11. 28 | contradiction |
| 3. A | 12. 9 | |
| 4. D | 13. $(26,25)(10,7)$ | 18. a. Fibonacci Numbers, |
| 5. D | 14. $\frac{12\sqrt{6}}{5}$ | $f(1) = 1, f(2) = 2,$ |
| 6. E (36) | 15. 65 | $f(n) = f(n - 1) + f(n - 2)$ |
| 7. C | 16. $\sqrt{582}$ | b. For a given n there are |
| 8. C | | $f(n - 1)$ numbers ending in |
| 9. D | | 1 and $f(n - 2)$ numbers |
| | | ending in 2. |

Test C Solutions

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|-----------|--------------------------------|--|
| 1. A | 10. $\frac{2}{x}$ | 17. mod 8 leads to |
| 2. B | 11. 28 | contradiction |
| 3. D | 12. 1511 | |
| 4. A | 13. x^{29} (29 acceptable) | 18. $A = 11,$ |
| 5. A | 14. $x + 1$ | $F_{n+1} + \dots + F_{n+10} = F_{n+7}$ |
| 6. E (36) | 15. 80° (80 acceptable) | |
| 7. C | 16. 156 | |
| 8. D | | |
| 9. B | | |