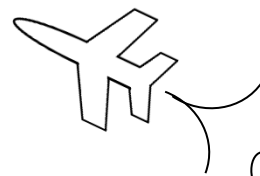


MAth on the Fly!



NAME: _____ DATE: _____

Prime Factorization

Find the prime factorization of each number.

1. 24 2. 20 3. 90

4. 18 5. 56 6. 17

7. 43 8. 88 9. 96

10. 63 11. 98 12. 60

13. 144 14. 180

15. 210 16. 375

17. 294 18. 625

19. 1400 20. 2457

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SOLUTIONS

- | | | | |
|----------|--|----------|---|
| 1. 24 | $24 = 2 \times 2 \times 2 \times 3$
$= 2^3 \times 3^1$ | 2. 20 | $20 = 2 \times 2 \times 5$
$= 2^2 \times 5^1$ |
| 3. 90 | $90 = 2 \times 3 \times 3 \times 5$
$= 2^1 \times 3^2 \times 5^1$ | 4. 18 | $18 = 2 \times 3 \times 3$
$= 2^1 \times 3^2$ |
| 5. 56 | $56 = 2 \times 2 \times 2 \times 7$
$= 2^3 \times 7^1$ | 6. 17 | $17 = 17^1$ (Prime Number) |
| 7. 43 | $43 = 43^1$ (Prime Number) | 8. 88 | $88 = 2 \times 2 \times 2 \times 11$
$= 2^3 \times 11^1$ |
| 9. 96 | $96 = 2 \times 2 \times 2 \times 2 \times 2 \times 3$
$= 2^5 \times 3^1$ | 10. 63 | $63 = 3 \times 3 \times 7$
$= 3^2 \times 7^1$ |
| 11. 98 | $98 = 2 \times 7 \times 7$
$= 2^1 \times 7^2$ | 12. 60 | $60 = 2 \times 2 \times 3 \times 5$
$= 2^2 \times 3^1 \times 5^1$ |
| 13. 144 | $144 = 2 \times 2 \times 2 \times 2 \times 3 \times 3$
$= 2^4 \times 3^2$ | 14. 180 | $180 = 2 \times 2 \times 3 \times 3 \times 5$
$= 2^2 \times 3^2 \times 5^1$ |
| 15. 210 | $210 = 2 \times 3 \times 5 \times 7$
$= 2^1 \times 3^1 \times 5^1 \times 7^1$ | 16. 375 | $375 = 3 \times 5 \times 5 \times 5$
$= 3^1 \times 5^3$ |
| 17. 294 | $294 = 2 \times 3 \times 7 \times 7$
$= 2^1 \times 3^1 \times 7^2$ | 18. 625 | $625 = 5 \times 5 \times 5 \times 5$
$= 5^4$ |
| 19. 1400 | $1400 = 2 \times 2 \times 2 \times 5 \times 5 \times 7$
$= 2^3 \times 5^2 \times 7^1$ | 20. 2457 | $2457 = 3 \times 3 \times 3 \times 7 \times 13$
$= 3^3 \times 7^1 \times 13^1$ |