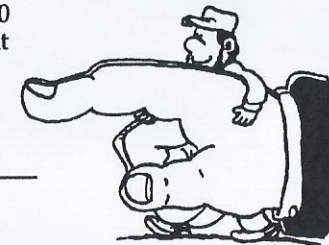
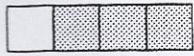


1. When an odd number is divided by 2, the remainder is 1.
A) 0 B) 1 C) 2 D) prime
2. For every two men who prefer stripes, one prefers solids. So, 40 prefer stripes and 20 prefer solids.
A) 15 B) 20 C) 30 D) 40
3. Since $4 = 2^2$, choice D is correct.
A) 4444 B) 444 C) 44 D) 4
4. $88 \times 44 = 11 \times 8 \times 11 \times 4 = 11 \times 11 \times 32$.
A) 12 B) 20 C) 32 D) 122
5. Work backwards: $37 - 9 = 28$, and $28 \div 2 = 14$.
A) 14 B) 15 C) 19 D) 28
6. Subtracting $(10+20+30+40)$ leaves $(100+100+100+100) = 400$.
A) 270 B) 310 C) 330 D) 400
7. $2^2+2^2+2^2+2^2 = 4+4+4+4 = 16 = 4^2$. A) 4^2 B) 8^2 C) 16^2 D) 22^2
8. Since $7 \times 7 + 7 \times 7 = 49 + 49 = 98 = 14 \times 7$, choice A is correct.
A) 14 B) 21 C) 49 D) 56
9. (# of digits in 1000000) : (# of digits in 12000000) = 7:8.
A) 1:12 B) 1:2 C) 3:4 D) 7:8
10. $111+999 = 1110 = 5 \times 222$. A) 110 B) 111 C) 220 D) 222
11. Area of a square = $\text{side}^2 = 6^2 = 36$. Perimeter = $4 \times \text{side} = 24$. Subtracting, $36 - 24 = 12$.
A) 6 B) 12 C) 18 D) 24
12. At my fastest, I carve 40 letters a day. At that rate, I'll need $(180 \div 40) = 4\frac{1}{2}$ days to carve 180 letters.
A) 4 B) $4\frac{1}{2}$ C) 5 D) $5\frac{1}{2}$
13. $11 \times 100 = 1100 = 110 \times 10 = 111 \times 10 - 10$.
A) 0 B) 1 C) 10 D) 11
14. 25% of 1 hour = 25% of 60 mins. = $\frac{1}{4}$ of 60 mins. = 15 mins.
A) 10 B) 12 C) 15 D) 25
15. $9 \times 9 \div 3 = 81 \div 3 = 27 = 3 \times 9$. A) 1 B) 3 C) 3^2 D) 3^3
16. $(989 \text{ rounded to the nearest ten}) - (989) = 990 - 989 = 1$.
A) 0 B) 1 C) 3 D) 10



17. Think of the shape of a sugar cube: it has 6 faces.
A) 2 B) 3 C) 4 D) 6
18. Since $2004 = 4 \times 501$, its largest odd divisor is 501.
A) 3 B) 167 C) 501 D) 1001
19. The sum of the 3 angles of a triangle is 180° , and $180^\circ \div 3 = 60^\circ$.
A) 30° B) 45° C) 60° D) 90°
20. Half my number is 6, so my number is 12. Its square is $12^2 = 144$.
A) 9 B) 36 C) 81 D) 144
21. A triangle with integer sides has perimeter 6. Each of the 3 sides must have length 2.
A) 3 B) 2 C) 1 D) 0
22. $3 \times 4 \times 25\text{¢} = 300\text{¢} = 5 \times 6 \times 10\text{¢}$.
A) dimes B) dollars C) nickels D) pennies
23. The divisors of 9 are 1, 3, and 9. All the others have 4 divisors.
A) 6 B) 8 C) 9 D) 10
24. $\sqrt{4^2+4^2+4^2+4^2} = \sqrt{16+16+16+16} = \sqrt{64} = 8 = 2 \times 4$.
A) 4 B) 8 C) 4^2 D) 8^2
25. The 8 such primes are 11, 13, 17, 19, 23, 29, 31, and 37.
A) 7 B) 8 C) 13 D) 14
26. If I have 21 hands, I may have 10 that point right, 10 that don't point at all, and only 1 that points left. But if I have 22 hands, at least 2 must point left.
A) 6 B) 11 C) 21 D) 22
27. If the average is 10, the numbers must be 8, 9, 10, 11, and 12.
A) 10 B) 12 C) 13 D) 15
28. One of each coin totals 41¢, so I must have a multiple of 41¢. I could have $1 \times 41\text{¢} = 41\text{¢}$, or $3 \times 41\text{¢} = \$1.23$, or $6 \times 41\text{¢} = \$2.46$.
A) 41¢ B) \$1.23 C) \$1.68 D) \$2.46
29. Use ratios: $30\% : 60 = 70\% : ?$. Now, $? = 2 \times 70 = 140$.
A) 70 B) 100 C) 130 D) 140
30. Since 10 is half my age, I'm 20 now; 4 years ago I was 16.
A) 20 B) 16 C) 14 D) 6



<p>31. Area of one square = $144 \div 4 = 36$, so each square's side = 6. Distance around shaded region = 8 sides = $8 \times 6 = 48$.</p> <p>A) 36 B) 48 C) 60 D) 108</p>		31. B
<p>32. $1 \times 2 \times 3 \times 4 \times 5 = 120$, so $120\,000 = 1 \times 2 \times 3 \times 4 \times 5 \times 1000$, and the greatest possible value of one of the six integers is 1000.</p> <p>A) 1000 B) 2000 C) 3000 D) 6000</p>	32. A	
<p>33. If every gumball weighs 3 g, then a machine that holds 3000 g of gumballs holds 1000 gumballs.</p> <p>A) 100 B) 300 C) 1000 D) 3000</p>	33. C	
<p>34. Ten such #s are 101,111,...,191. With 9 choices for 1st & last digits, there are $10 \times 9 = 90$ such numbers.</p> <p>A) 81 B) 90 C) 99 D) 100</p>	34. B	
<p>35. The sum of 500 odd numbers is even. Now we add only even numbers, so the final sum is even.</p> <p>A) even B) odd C) prime D) negative</p>	35. A	
<p>36. Each triangle uses 3 dots, so each <i>does not</i> use 1 dot. There are 4 ways to <i>not</i> use 1 of the 4 dots, hence 4 triangles.</p> <p>A) 2 B) 3 C) 4 D) 5</p>	36. C	
<p>37. The four largest possible missing digits are 9, 8, 6, and 5. The sum of all 6 digits is $1+7+9+8+6+5 = 36$. The largest possible average of all 6 digits is $36 \div 6 = 6$.</p> <p>A) 4 B) 6 C) $6\frac{1}{2}$ D) 7</p>	37. B	
<p>38. Coach ran the 1st half twice as fast as he ran the 2nd half, so it took him 10 mins. to run the 1st 2 km. and 20 mins. to run the last 2 km. A speed of 2 km in 20 mins. is the same as a speed of 6 km in 60 mins., or 6 km/hr.</p> <p>A) 4 B) 6 C) 8 D) 12</p>	38. B	
<p>39. $6 \times 35 = 2 \times 3 \times 5 \times 7$, so choice D has the most prime factors, four.</p> <p>A) 1×121 B) 11×15 C) 7×19 D) 6×35</p>	39. D	
<p>40. If the 1st is a Saturday, so are the 8th, 15th, 22nd, & 29th. The 30th is a Sunday, which gives us 5 Saturdays and 5 Sundays.</p> <p>A) Thursday B) Friday C) Saturday D) Sunday</p>	40. C	

The end of the contest **6**

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