
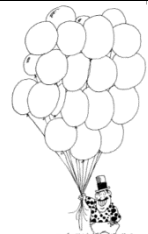



<p>1. If <math>\frac{1}{3}</math> of my hats are red, <math>\frac{2}{3}</math> of my hats are not red. I have 36 hats that are not red, so 18 hats are red. I have <u>54</u> hats. B. 54</p> 	<p>2. Each angle in an equilateral triangle is <math>60^\circ</math>. If the sum of the measures of the 2 angles of a triangle is <math>&gt; 120^\circ</math>, the third angle is <math>&lt; 60^\circ</math>. The third angle is one of the 2 smallest angles. If the sum of the measures of the 2 smallest angles of a triangle is <math>&lt; 120^\circ</math>. D. 61 degrees</p>
<p>3. The multiples of 10 that are factors of 100 are 10, 20, 50, and 100. D. 4</p>	<p>4. <math>1 \times 3 \times 5 \times 7 \times 9 = 1 \times 3 \times 5 \times 7 \times 3 \times 3</math> <math>2 \times 4 \times 6 \times 8 \times 10 = 2 \times 2 \times 2 \times 2 \times 3 \times 2 \times 2 \times 2 \times 2 \times 5</math> The common factors are 1, 3, 5, and 15. The greatest is 15. D. 15</p>
<p>5. If I double my speed of 12000 m/hr., my new speed will be 24000 m/hr = 400 m/min because 1 hr = 60 mins and <math>24000 \div 60 = 400</math>. B. 400 m/min.</p>	<p>6. If 2 balloons popped every 3 minutes, then 40 balloons popped in an hour. Since one-fourth is 40, three-fourths is 120. C. 120</p> 
<p>7. <math>6^8 = 2^8 \times 3^8</math> <math>8^6 = 2^{18}</math> The g.c.f. of <math>6^8</math> and <math>8^6</math> is <math>2^8 = 4^4</math> B. <math>4^4</math></p>	<p>8. <math>100^{2018} = 2^{2018} \times 5^{2018} \times 2^{2018} \times 5^{2018}</math>. The expression <math>100^{2018}</math> can be written as the product of <math>4 \times 2018</math> primes. B. <math>4 \times 2018</math></p>
<p>9. Sully woke up at 6:50 a.m. on a Monday. For Sully to wake up 30 minutes earlier, it must be 6 days after Monday. The day 6 days after Monday is Sunday. A. Sunday</p>	<p>10. Last year I spent \$180 for 80 pairs of shade. That is \$2.25 per pair. This year I spent \$180 for 75 pairs of the same shades. That is \$2.40 per pair. The price has increased 15¢ per pair. A. 15¢</p> 
<p>11. It took <math>318/60 = 5</math> hrs. 18 mins. to drive. Working backwards, 5 hrs. before 5 p.m. was 12 p.m.; 18 mins. before 12 p.m. was 11:42 a.m. B. 11:42 a.m.</p>	<p>12. The factor of 12 is 1, 2, 3, 4, 6 and 12. The product of all the factors of 12 is <math>(1 \times 12) \times (2 \times 6) \times (3 \times 4) = 12 \times 12 \times 12 = 12^3</math>. C. 12</p>
<p>13. Since 8 students got an A and 15 got a C or higher, the number getting Bs and Cs is 7. Since 10 got a B or lower, and 7 got Bs and Cs, and one got a D, there are 2 students who got an F. B. 2</p>	<p>14. Since <math>2^2 \div 2^1 = 2</math>, <math>2^4 \div 2^3 = 2</math>, ..., <math>2^{100} \div 2^{99} = 2</math>, <math>(2^2 \times 2^4 \times 2^6 \times \dots \times 2^{98} \times 2^{100}) \div (2^1 \times 2^3 \times 2^5 \times \dots \times 2^{97} \times 2^{99}) = 2^{50}</math> C. <math>2^{50}</math></p>
<p>15. The l.c.m. of 15 and 18 is 90, so every 90 seconds the balls were rolled at the same time. There are 2640 seconds in 44 minutes, and <math>2640 \div 90 = 29R30</math>. Counting the balls rolled at 1:00 p.m., there were 30 times balls were rolled at the same time. B. 30</p>	