

Dear parents and guardians, please find the answers for Friday's work below.
Brain teaser: 12

Maths:

- 1. d.** Work backwards to find the solution. George has 5 cousins, which is 11 less than Bonnie has; therefore, Bonnie has 16 cousins. Bonnie has twice as many as Robert has, so half of 16 is 8. Robert has 8 cousins.
- 2. c.** Set up a proportion with $\frac{\text{milk}}{\text{soda}}, \frac{2}{5} = \frac{10}{x}$. Cross multiply and solve; $(5)(10) = 2x$. Divide both sides by 2; $\frac{50}{2} = \frac{2x}{2}; x = 25$ sodas.
- 3. b.** To earn an average of 93% on four tests, the sum of those four tests must be $(93)(4)$ or 372. The sum of the first three tests is $85 + 92 + 95 = 272$. The difference between the needed sum of four tests and the sum of the first three tests is 100. He needs a 100 to earn a 93 average.
- 4. c.** To find the number of boxes needed, you should divide the number of cans by 40; $320 \div 40 = 8$ boxes.
- 5. d.** From 10 A.M. Friday to 10 A.M. Saturday is 24 hours. Then, from 10 A.M. Saturday to 6 P.M. Saturday is another 8 hours. Together, that makes 32 hours.
- 6. b.** Use the order of operations and try each option. The first option results in 14 because $2 \times 5 = 10$, then $10 + 4 = 14$. This does not work. The second option does result in 18. The numbers in parentheses are added first and result in 9, which is then multiplied by 2 to get a final answer of 18. Choice **c** does not work because the operation in parentheses is done first, yielding 6, which is then multiplied by 5 to get a result of 30. Choice **d** does not work because the multiplication is done first, yielding 8, which is added to 5 for a final answer of 13.
- 7. a.** Multiply the number of miles (9) by the amount pledged per mile (\$0.50); $9 \times 0.50 = \$4.50$. To multiply decimals, multiply normally, then count the number of decimal places in the problem and place the decimal point in the answer so that the answer has the same number of decimal places as the problem.
- 8. d.** To find the square root ($\sqrt{\quad}$) you ask yourself, "What number multiplied by itself gives me 36?" $6 \times 6 = 36$; therefore, 6 is the square root of 36.
- 9. c.** Mr. Brown plows 6 acres an hour, so divide the number of acres (21) by 6 to find the number of hours needed; $21 \div 6 = 3.5$ hours.

10. d. This is the only answer choice that has only PRIME numbers. A prime number is a number with two and only two distinct factors. In choice **a**, 42 is not prime. In choice **b**, 4 and 6 are not prime. In choice **c**, 6 is not prime.

11. c. $2^5 = 2 \times 2 \times 2 \times 2 \times 2 = 32$

Topic: (approximated values)

farmer (7%),
chocolate company (40%),
government (25%)
supermarket (28%)