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- 1) If $x = 2018$, then the expression $x^2 + 2x - x(x + 1)$ equals
(A) -2018 (B) 2018 (C) 10090 (D) -10090 (E) 4039

- 2) Which of the following is equal to $20(x + y) - 19(y + x)$ for all values of x and y ?
(A) $39x + 39y$ (B) $x + y$ (C) $39x + y$ (D) $x + 39y$ (E) $19x - 18y$

- 3) For every real number x , the expression $(x + 1)^2 - x^2$ is equal to
(A) $2x + 1$ (B) $2x - 1$ (C) $(2x + 1)^2$ (D) -1 (E) $x + 1$

- 4) Which of the following expressions is not equivalent to $3x + 6$?
(A) $3(x + 2)$ (B) $\frac{-9x-18}{-3}$ (C) $\frac{1}{3}(3x) + \frac{2}{3}(9)$
(D) $\frac{1}{3}(9x + 18)$ (E) $3x - 2(-3)$

- 5) If $x = 2y$ and $y \neq 0$, then $(x - y)(2x + y)$ equals
(A) $5y^2$ (B) y^2 (C) $3y^2$ (D) $6y^2$ (E) $4y^2$

ANSWERS AND SOURCES

- 1) B, 2018 Cayley (Grade 10), #6
- 2) B, 2019 Fermat (Grade 11), #2
- 3) A, 2020 Fermat (Grade 11), #3
- 4) C, 2020 Pascal (Grade 9), #16
- 5) A, 2014 Cayley (Grade 10), #12