

5.1

$$\textcircled{1} 13^0 = 1 \quad \textcircled{2} 5^{-3} = \frac{1}{5^3} = \frac{1}{125} \quad \textcircled{3} \frac{3}{3^{-4}} = 3(3^4) = 243$$

$$\textcircled{4} \frac{2}{4^1} = 2(4^1) = 8 \quad \textcircled{5} -(7)^{-2} = -\frac{1}{7^2} = -\frac{1}{49}$$

$$\textcircled{6} 46^{-1} = \frac{1}{46} \quad \textcircled{7} -6^0 = -1 \quad \textcircled{8} -(12x)^{-2} = -\frac{1}{(12x)^2} = -\frac{1}{144x^2}$$

$$\textcircled{9} \frac{1}{8^0} = \frac{1}{1} = 1 \quad \textcircled{10} 6bc^0 = 6b(1) = 6b \quad \textcircled{11} -(11x)^0 = -1$$

$$\textcircled{12} \left(\frac{2}{9}\right)^{-2} = \frac{2^{-2}}{9^{-2}} = \frac{9^2}{2^2} = \frac{81}{4} \quad \textcircled{13} 3m^{-8}p^0 = \frac{3p^0}{m^8} = \frac{3(1)}{m^8} = \frac{3}{m^8}$$

$$\textcircled{14} \frac{5a^{-4}}{2c} = \frac{5}{2a^4c} \quad \textcircled{15} \frac{-3k^{-3}(mn)^3}{p^{-8}} = \frac{-3m^3n^3p^8}{k^3}$$

$$\textcircled{16} \left(\frac{2m}{3n}\right)^{-3} = \frac{(2m)^{-3}}{(3n)^{-3}} = \frac{(3n)^3}{(2m)^3} = \frac{27n^3}{8m^3}$$

$$\textcircled{17} 8^{-2}9^3r^{-5} = \frac{9^3}{8^2r^5} = \frac{9^3}{64r^5}$$

$$\textcircled{18} -(10a)^{-4}b^0 = -\frac{1}{(10a)^4} = -\frac{1}{10000a^4}$$

$$(19) \frac{11xy^{-1}z^0}{v^{-3}} = \frac{11xv^3}{y} = \frac{11v^3x}{y}$$

$$(20) \frac{5m^{-1}}{9(ab)^{-4}c^7} = \frac{5a^4b^4}{9c^7m}$$

$$(21) 3a^{-1} = \frac{3}{a} \cdot 1 = \frac{3}{4}$$

$$(22) b^{-3} = \frac{1}{b^3} = \frac{1}{3^3} = \frac{1}{27}$$

$$(23) 4a^2b^{-2}c^3 = \frac{4a^2c^3}{b^2}$$

$$(24) 9a^0c^4 = 9(1)c^4 = 9c^4 = 9(2)^4 = 9(16) = 144$$

$$(25) -a^{-2} = -\frac{1}{a^2} = -\frac{1}{4} = \frac{1}{4}$$

$$(26) (-c)^{-2} = \frac{1}{(-c)^2} = \frac{1}{(-2)^2} = \frac{1}{4}$$

$$(27) \frac{1}{1000} = \frac{1}{10^3} = 10^{-3}$$

$$(28) \frac{1}{10} = \frac{1}{10^1} = 10^{-1}$$

$$(29) 10^{-3} = 0.001 \quad (30) 8 \cdot 10^{-4} = 8 \cdot 0.0001 = 0.0008$$

$$\textcircled{31} \quad 1200 \cdot 2^w = 1200 \cdot 2^{-3} = 1200 \cdot \frac{1}{8} = 150$$

This means that 3 weeks ago ( $w = -3$ ),  
150 people would have voted early that week.