6.EE Exponent Experimentation

Task

In each equation below, $x$ can be replaced with a number that makes the equation true. Find such a number.

a. $64 = x^2$
b. $64 = x^3$
c. $2^x = 32$
d. $x = \left(\frac{2}{5}\right)^3$
e. $\frac{16}{9} = x^2$
f. $2 \cdot 2^5 = 2^x$
g. $2x = 2^4$
h. $4^3 = 8^x$
i. $x^2 = 25$
j. $(x + 1)^2 = 25$