Algebra 2
Homework   1/16/24
3.1 Properties of Exponents   Solutions

1) 1. $a = 8$
   2. $b = 6$
   3. $c = -2$

2) B, D

3) D

4) 1. $m = -3$
   2. $n = 4$
   3. $k = -2$

5) 1.   1
   2.   Exponent rule: $\dfrac{a^m}{a^n} = a^{m-n}$

$$1 = \frac{6^3}{6^3} = 6^{3-3} = 6^0 = 1$$

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3.2   Square roots and Cube roots

1) $7^2 = 49$ $\dfrac{7^{-3}}{7^{-5}} = 7^{(-3-(-5))} = 7^2$

2) b. $d \cdot 4 = 12$
        $d = 3$

   2. $3^5 \cdot 7^5 = e^5$
        $3 \cdot 7 = e = 21$

   3. $5^0 \cdot 5^f = 5^{-4}$
        $5^{-f} = 5^4$
        $f = 4$

3) A. 3 cm

4)

S	5	7	$\sqrt{63}$	$\sqrt{98}$	$\sqrt{102}$	$\sqrt{125}$
A	25	49	63	98	102	125

5) $6^2 = 36 < 42 < 49 = 7^2$

       $6 < \sqrt{42} < 7$