

Exponential Equations WS#1

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Solve each equation.

1) $5^{2r-3} = 625$

2) $5^{2n} = 5^{-3n-1}$

3) $4^{-x-3} = 4^2$

4) $5^{-2b} = 25$

$$5) 5^{3-2a} = 25$$

$$6) 6^{-n} = \frac{1}{216}$$

$$7) 36^{2v} \cdot 36^{-v} = \frac{1}{6}$$

$$8) 125^{-3x} \cdot 625 = 5^2$$

$$9) 64^x \cdot 64^{x+1} = \frac{1}{2}$$

$$10) 3^3 \cdot 243^{n+2} = \frac{1}{81}$$

$$11) 27^{-2r} \cdot 3^5 = 3^4$$

$$12) \left(\frac{1}{16}\right)^x \cdot 16^{-x-1} = 4$$

$$13) 3^3 \cdot 9^{p+2} = 27^{2p}$$

$$14) 36^{3k+2} \cdot 36^{-2k-2} = 216^{-3k}$$

$$15) 64^{-3x} \cdot 32^x = \frac{1}{4}$$

$$16) 64^{2n+2} \cdot 8^{3n} = \left(\frac{1}{64}\right)^n$$