NAME_____**DATE**_____**PER.**_____

Properties of Exponents – Day 1

Simplify each expression.

1) $2^6 \bullet 2^4 =$	2) $c^7c^2 =$	3) $5t^{\frac{4}{3}} \bullet 2t^{\frac{2}{3}} =$
4) $(5x^5y^6)(9x^2) =$	5) $(-3x^5y^2)(-2x^6y)(-2x^2y^3) =$	6) $(4c^4)(ac^3)(3a^5c) =$
7) $\frac{g^5}{g^9} =$	8) $\frac{r^{\frac{11}{2}}}{r^4} =$	9) $\frac{c^2d}{c^4d^3} =$
10) $\frac{12x^3y^6}{4x^7y} =$	11) $\frac{a^2b^1c^4}{ab^4c^3} =$	12) $\frac{10r^8s^4t^2}{2r^5s^2t^2} =$
13) $\frac{(4c)(-3c^{\frac{3}{2}})}{6c^{\frac{1}{2}}} =$	14) $\frac{(6v^3)(4v^8)}{-2v^7} =$	15) $\frac{(-3p^2q^4)(-8pq)}{-4p^6q^2} =$

16) Find the area of a rectangle in square units if the length if the rectangle is $5x^4y^{\frac{1}{2}}$ and the width of the rectangle is $7xy^{\frac{1}{2}}$.

17. If the area of the rectangle is $20a^9b^4$ square units and the length of the rectangle is $4a^6b^2$, what expression would represent the width?

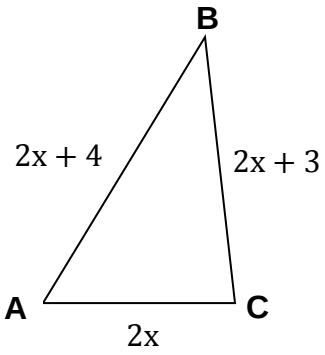
18) If the area of the parallelogram is $24a^5b^6$ square units and the base of the parallelogram is $4a^3b^5$, what expression would represent the height?

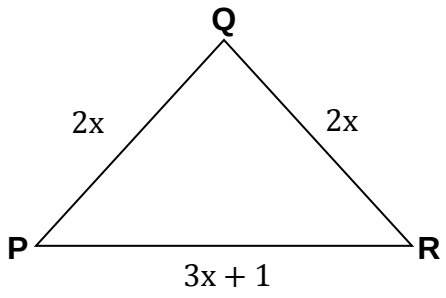
19) Which expression is equivalent to $\frac{z^a \cdot z^b}{z^c}$?

A. $z^{(a - b - c)}$
B. $z^{(a - b + c)}$
C. $z^{(a + b - c)}$
D. $z^{(a + b + c)}$

Review. Show all work.

20) The perimeters of the triangles shown are equal. Find the side lengths of each triangle.





Equation: _____

Length of AB: _____ Length of PQ: _____

Length of BC: _____ Length of QR: _____

Length of AC: _____ Length of PR: _____