

HW #2 pg. 420 # 3-21, 25, 26

$$3. 3^2 \cdot 3^2 = 3^{2+2} = \boxed{3^4}$$

$$4. 8^{10} \cdot 8^4 = \boxed{8^{14}}$$

$$5. (-4)^5 \cdot (-4)^7 = \boxed{(-4)^{12}}$$

$$6. a^3 \cdot a^3 = \boxed{a^6}$$

$$7. h^6 \cdot h = \boxed{h^7}$$

$$8. \left(\frac{2}{3}\right)^2 \cdot \left(\frac{2}{3}\right)^6 = \boxed{\left(\frac{2}{3}\right)^8}$$

$$9. \left(\frac{-5}{7}\right)^8 \cdot \left(\frac{-5}{7}\right)^9 = \boxed{\left(\frac{-5}{7}\right)^{17}}$$

$$10. (-2.9) \cdot (-2.9)^7 = \boxed{(-2.9)^8}$$

$$11. (5^4)^3 = \boxed{5^{12}}$$

$$12. (b^{12})^3 = \boxed{b^{36}}$$

$$13. (3.8^3)^4 = \boxed{(3.8)^{12}}$$

$$14. \left(\left(\frac{-3}{4}\right)^5\right)^2 = \boxed{\left(\frac{-3}{4}\right)^{10}}$$

$$15. 5^2 \cdot 5^9 = (5 \cdot 5)^{2+9}$$

error!

you keep the base!

$$= \boxed{5^{11}}$$

$$16. (r^6)^4 = r^{6+4}$$

error!

You multiply the exponents

$$= \boxed{r^{24}}$$

$$17. (6g)^3 = 6^3 g^3 = \boxed{216g^3}$$

$$18. (-3v)^5 = (-3)^5 v^5 = \boxed{-243v^5}$$

$$19. \left(\frac{1}{5}k\right)^2 = \boxed{\frac{1}{25}k^2}$$

$$20. (1.2m)^4 = \boxed{2.0736m^4}$$

$$21. (rt)^{12} = \boxed{r^{12}t^{12}}$$

$$25. 2^4 \cdot 2^5 - (2^2)^2$$

$$2^9 - 2^4$$

$$512 - 16$$

$$\boxed{496}$$

$$26. 16 \left(\frac{1}{2}x\right)^4$$

$$16 \cdot \frac{1}{16}x^4 = \boxed{x^4}$$