How Would You Describe a Window in the Kitchen Eating Area?

Simplify the expression, then cross out the letter pair next to the correct answer. For each letter pair that you DON'T cross out, write the upper case letter in the box containing the lower case letter.

1 $\dfrac{7a^8}{21a^3}$ **2** $\dfrac{6a^2}{15a^9}$ **7** $\dfrac{xy^{-4}}{x^3y^{-1}}$ **8** $\dfrac{3^2x^7y^2}{3^5x^3y^{-5}}$

3 $\dfrac{-2a^3}{16a^{10}}$ **4** $\dfrac{18a^{-2}}{9a^7}$ **9** $\dfrac{-24x^2y}{-8x^9y^4}$ **10** $\dfrac{60x^{-1}y^6}{-5x^6y^3}$

5 $\dfrac{8a^{-3}}{12a^{-4}}$ **6** $\left(\dfrac{5}{a^3}\right)^3$ **11** $\left(\dfrac{2x}{5y^4}\right)^2$ **12** $\left(\dfrac{2x}{5y^4}\right)^{-2}$

d A $125a^6$	**h W** $-\dfrac{1}{8a^7}$	**r C** $\dfrac{a^5}{3}$	**h I** $\dfrac{25x}{4y^4}$	**a T** $\dfrac{3}{x^7y^3}$	**i P** $-\dfrac{12y^3}{x^7}$
m J $\dfrac{2}{5a^7}$	**p O** $\dfrac{2a^2}{5}$	**a V** $\dfrac{125}{a^9}$	**c S** $\dfrac{4x^2}{25y^8}$	**o F** $\dfrac{1}{x^2y^3}$	**m E** $-\dfrac{12}{x^3y^3}$
l Y $\dfrac{2a}{3}$	**b S** $\dfrac{2}{a^9}$	**f E** $-\dfrac{1}{8a^9}$	**r K** $\dfrac{x^4}{9y^3}$	**k U** $\dfrac{25y^8}{4x^2}$	**g N** $\dfrac{x^4y^7}{27}$

13 $\left(\dfrac{3m^2t^5}{2m^3t^{-1}}\right)^2$ **14** $\left(\dfrac{3m^2t^5}{2m^3t^{-1}}\right)^{-2}$ **19** $\dfrac{9\times10^5}{3\times10^9}$ **20** $\dfrac{6.5\times10^4}{1.3\times10^{-7}}$

15 $\left(\dfrac{4m^4t^{-9}}{mt^{-2}}\right)^{-3}$ **16** $\dfrac{m^{-5}t^{-2}}{(3m^2t)^3}$ **21** $\dfrac{4.5\times10^{-8}}{2.5\times10^{-3}}$ **22** $\dfrac{3.2\times10^{-6}}{6.4\times10^2}$

17 $\dfrac{-36m^2t^{-3}}{9m^{-2}t^{-7}}$ **18** $\left(\dfrac{m^{-5}t^8}{2mt^3}\right)^{-4}$ **23** $\dfrac{72{,}000{,}000}{0.00024}$ **24** $\dfrac{0.000000441}{0.0098}$

c D $-4m^4t^4$	**i N** $-4m^8t^2$	**o T** $\dfrac{t^{21}}{64m^9}$	**q R** 5×10^{11}	**e S** 3×10^{-4}	**o N** 4.5×10^{-2}
a A $\dfrac{t^{18}}{64m^6}$	**k G** $\dfrac{16m^{24}}{t^{20}}$	**q L** $\dfrac{4m^2}{9t^{12}}$	**b L** 1.8×10^{-5}	**g W** 3×10^{11}	**k T** 1.8×10^{11}
e R $\dfrac{9t^{12}}{4m^2}$	**j E** $\dfrac{1}{27m^{11}t^5}$	**l H** $\dfrac{16m^{21}}{t^{10}}$	**c P** 3×10^8	**j D** 5×10^{-9}	**n M** 4.5×10^{-5}

25 The Quadrangle College Library estimates that the average book on its shelves is 3.2×10^{-2} m thick. The library has a total of 8×10^3 m of shelf space. How many books will fit in the library?

26 The speed of light in space is 3×10^8 km/s. Sirius A, the brightest star in the heavens, is 8.1×10^{13} km from the earth. How many seconds does it take for light to travel from Sirius A to the earth?
   EXTRA: Convert your answer to days.

q O 2.5×10^6 **b T** 2.7×10^5 **n R** 2.5×10^5 **e N** 2.7×10^4

a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r
		P		N						T				N		O	