

# How Does the King's Son Write?

Simplify each expression. For each set of exercises, there is one extra answer. Write the letter of this answer in the corresponding box at the right.



**1**

a.  $9x \cdot x^5$       (K)  $24x^5$   
 (O)  $-6x^{10}$

b.  $5x^2 \cdot 4x^3$       (A)  $9x^6$   
 (E)  $24x^{10}$

c.  $(-8x^4)(-3x)$       (L)  $20x^5$

d.  $(6x^4)(-x^6)$

**2**

a.  $(7n^3)^2$       (W)  $64n^{12}$   
 (I)  $625n^{12}$

b.  $(-4n^8)^3$       (U)  $-64n^{24}$   
 (B)  $49n^6$

c.  $(5n^4)^4$       (D)  $625n^{16}$

d.  $(-2n^2)^6$

**3**

a.  $(4m^7d^2)^2$       (T)  $16m^{14}d^4$   
 (G)  $-m^6d^{15}$

b.  $(-9m^4d^3)^2$       (V)  $81m^8d^6$   
 (E)  $m^6d^8$

c.  $(-m^2d^5)^3$       (R)  $81m^4d^{36}$

d.  $(-3md^9)^4$

**4**

a.  $3xy(5x^2y)^2$       (S)  $-56x^3y^7$   
 (N)  $100x^{20}y^7$

b.  $(-7y)(2xy^2)^3$       (C)  $75x^5y^3$   
 (F)  $-9x^4y^{19}$

c.  $x^8y^3(-10x^5y^4)^2$       (T)  $100x^{18}y^{11}$

d.  $(xy^4)^4(-9y^3)$

**5**

a.  $(5p^2q^3)(p^5q)(2p^4q)$       (H)  $72p^{10}q^{12}$   
 (B)  $-72p^{16}q^3$

b.  $(2p^5q^2)(9p^3)(-4p^8q)$       (G)  $10p^{11}q^5$   
 (L)  $72p^5q^{10}$

c.  $(-18q^6)(4p^4q)(-pq^3)$       (M)  $-72p^{10}q^8$

d.  $3pq(-2q^5)(12p^9q^2)$

**6**

a.  $(8ut^3)^2(u^2t)^2$       (W)  $-u^{10}t^8$   
 (T)  $64u^6t^8$

b.  $(u^4t)^3(-2ut^5)^4$       (F)  $u^4t^6$   
 (S)  $16u^{16}t^{23}$

c.  $(-ut^3)(-ut)^3$       (R)  $-u^4t^8$

d.  $(-u^2t)^4(-u^2t^4)$

**7**

a.  $(3ab^2c^5)^3(a^3b^8c)^2$       (D)  $27a^9b^{22}c^{17}$   
 (C)  $-88a^4b^3c^6$

b.  $(-bc^5)(a^4b^3c^9)(-ab^8)$       (G)  $a^{12}b^6c^{10}$   
 (T)  $-88a^4b^4c^5$

c.  $(-2ab)^3(ac^3)(11bc^2)$       (K)  $a^5b^{12}c^{14}$

d.  $(a^2bc)^5(a^2bc^5)$

**8**

a.  $(\frac{1}{2}k^8v^3)^2(60kv^4)$       (P)  $-15k^9v^9$   
 (T)  $40k^{15}v^9$

b.  $(10k^5v)^3(\frac{1}{5}v^3)^2$       (W)  $15k^{17}v^{10}$   
 (B)  $-k^9v^9$

c.  $-(k^9v^2)(-15v^6)$       (S)  $15k^9v^8$

d.  $(-kv)^2(-kv)^3(-kv)^4$

# What Do You Call a Bar of Soap That Doesn't Clean?

Simplify the expression, then cross out the letter pair next to the 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  $x^2 \cdot x^5$

2  $7x^3 \cdot x$

3  $4x^4 \cdot 3x$

4  $x \cdot x^3 \cdot x^9$

5  $(-5x^7)(-6x^2)$

6  $x(-x^5)(-x^5)$

f • P  $12x^5$

d • H  $x^{11}$

e • J  $x^7$

o • U  $30x^4$

b • O  $x^{13}$

g • T  $7x^4$

l • W  $30x^9$

h • A  $x^9$

7  $(ab^3)(a^3b)$

8  $(2ab)(3ab^5)$

9  $(-4ab^2)(9a^5b)$

10  $ab(-8a^3b^2)$

11  $(-2a^4b)(-7ab^6)$

12  $-3a(12a^2b^7)$

b • S  $14a^5b^7$

l • B  $6a^3b^5$

n • N  $-36a^3b^7$

p • X  $6a^2b^6$

j • G  $-8a^4b^3$

k • C  $a^4b^4$

e • U  $14a^4b^9$

f • V  $-36a^6b^3$

13  $(5m^3)(-m^8t^2)$

14  $(-4m^4t)(15t^5)$

15  $(11m^4t^9)(7mt)$

16  $(3m^2)(m^3t^3)(2mt^2)$

17  $(-8mt^4)(-2t)(m^4t^3)$

18  $3t^5(-mt)(20m^7)$

n • L  $16m^5t^8$

k • I  $-5m^{11}t^2$

j • D  $6m^5t^{10}$

g • T  $77m^5t^{10}$

i • M  $-60m^8t^6$

f • N  $6m^6t^5$

b • A  $16m^6t^3$

d • S  $-60m^4t^6$

19  $(n^2)^3$

20  $(-n^5)^2$

21  $(5n^8)^2$

22  $(-2n^4)^3$

23  $(10n)^3$

24  $(-3n^9)^4$

f • B  $81n^{18}$

p • T  $-8n^{12}$

c • N  $25n^{16}$

d • L  $81n^{36}$

m • I  $n^6$

n • D  $-8n^{16}$

g • F  $n^{10}$

k • E  $1000n^3$

25  $(3x^2y^3)^2$

26  $(5x^4y)^3$

27  $(-7x^5y^2)^2$

28  $(-4xy^8)^3$

29  $(-2x^2y^3)^5$

30  $(3x^7y^2)^4$

k • U  $81x^{20}y^6$

a • S  $9x^4y^6$

g • L  $-32x^{10}y^{15}$

d • R  $49x^{12}y^4$

q • E  $125x^{12}y^3$

i • N  $-64x^3y^{24}$

c • T  $81x^{28}y^8$

p • G  $49x^{10}y^4$

31  $2kd(5k^2d)^2$

32  $-d(9kd^5)^2$

33  $(kd)^2(kd^2)$

34  $(2k)^4(-k^2)(-d)^2$

35  $(kd^8)(kd)^8(k^8d)$

36  $(-k^2d)^3(-k^2d^3)$

i • R  $-81k^2d^{11}$

q • T  $k^8d^6$

c • S  $k^3d^4$

g • B  $-81kd^7$

m • I  $k^{17}d^{17}$

a • H  $50k^5d^3$

p • D  $k^{15}d^{12}$

o • A  $-16k^6d^2$

a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q
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