

more ALGEBRA & THE NUMBER LAWS

1) Find a simple method of simplifying each of the following

delightful

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|--------------------------------------|----------------------------|----------------------------|
| a) $786 + 29 + 71$ | d) $20 \times 68 \times 5$ | g) $875 + 842 + 125$ |
| b) $50 \times 2 \times 0 \times 587$ | e) $200 + 6754 + 800$ | h) $4 \times 48 \times 25$ |
| c) $4 \times 27 \times 25$ | f) $50 \times 47 \times 2$ | i) $184 + 346 + 16$ |

2) Simplify

my favorite subject

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|-------------------|-------------------|----------------------------|----------------------------|
| a) $3y + 7y$ | g) $9t + 0$ | m) $7t + 3t - t$ | s) $(3y + 5y) \times 7$ |
| b) $b \times k$ | h) $4a \times 3b$ | n) $3y - 4y + 3y$ | t) $(5t + 7t) \div 2$ |
| c) $5k \times 4m$ | i) $5d \times 3d$ | o) $8y \times 3y \times 0$ | u) $5r + 8y + 9r - y$ |
| d) $6ab + 5ab$ | j) $6y \div 3$ | p) $3f + 5t + 6f$ | v) $3t - 4t + 5f$ |
| e) $9y \times 1$ | k) $7y \div y$ | q) $28fg \div 7g$ | w) $9k \times 4k \times 1$ |
| f) $3y + 6 + 8y$ | l) $6d \div 2d$ | r) $2y^2 \div y$ | x) $8 - 5e - 3$ |

it's so exciting

3) Expand

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|-----------------|-----------------|-----------------|-----------------|
| a) $3(p + d)$ | f) $t(g + h)$ | k) $6(5d + 7g)$ | p) $5(y - 7)$ |
| b) $5(3e - 2)$ | g) $y(k + y)$ | l) $5b(4b + 4)$ | q) $6r(5r - 2)$ |
| c) $4(8k + 3r)$ | h) $5y(y + 5)$ | m) $5h(5r - h)$ | r) $d(5t + 3)$ |
| d) $4(5f - 7)$ | i) $4f(3f - 3)$ | n) $3(6f + 2)$ | s) $4(6f + 9)$ |
| e) $2(6h + 4)$ | j) $4(6r - 7)$ | o) $6m(7m + 5)$ | t) $7(7y + 8)$ |

FANTASTIC

4) Expand and simplify

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|-----------------------------|----------------------------|----------------------------|
| a) $4(5y + 3) + 3(7y + 2)$ | g) $7t + 4(5t + 4) - 12$ | n) $4(7t + 5) + 2(1 - 5t)$ |
| b) $5(5f + 6) + 3(7f - 3)$ | h) $5(9k + 6y) + 19k$ | o) $3(8h + 4) - 48h - 18$ |
| c) $8(6g + 4) + 7(5g + 1)$ | j) $3(6j + 4) + 5(2y + 6)$ | p) $3(5r + 5) + 7(r - 4)$ |
| d) $9(4k + 3f) + 5(k + 2f)$ | k) $3(6 + 5t) + 5(2t + 3)$ | q) $6(6d + 2) + 4(d - 2)$ |
| e) $3k + 5(3k + 7) + 9$ | l) $6(y + k) + 7(5y - 1)$ | r) $3(7 + 5y) - 50y$ |
| f) $2(5r + 7) + 4(4r + 7y)$ | m) $5(7y + 4) + 6y - 13$ | s) $6(7y + 3) + 7(7y - 1)$ |

5) Simplify

Mr Cleary, please give me more of this work

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|-------------------|-------------------|---------------------------|--------------------|
| a) $3y + 5y$ | i) $4p - p - p$ | q) $a \times a$ | y) $7y \times 4y$ |
| b) $4t \times 7$ | j) $3n \times 1$ | r) $12y \div 3y$ | z) $9 + 6f - 3$ |
| c) $8g + 7g - g$ | k) $7k - 6k$ | s) $7 + 4 + 5f$ | A) $7t + 0$ |
| d) $8h - h$ | l) $15w \div 3$ | t) $3y \times 0 \times 4$ | B) $15bc \div 5b$ |
| e) $6k^2 \div k$ | m) $4t \times 4t$ | u) $5y + 7y - 4y$ | C) $5y + y^3$ |
| f) $2a + 4m + 3m$ | n) $5f + 7y$ | v) $8t - 3t$ | D) $9abc \div 3bc$ |
| g) $3f + f - 3f$ | o) $3ab + 5ba$ | w) $7cd - cd$ | E) $8y \times 3y$ |
| h) $5d \times 7d$ | p) $2r + 7 + 2r$ | x) $8k \div 8k$ | F) $3e + 6t - e$ |

6) Factorise

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|--------------|---------------|---------------|--------------|--------------|
| a) $7y + 35$ | c) $9r + 6$ | e) $5k + 10$ | g) $8y + 56$ | i) $4h - 8$ |
| b) $6p - 15$ | d) $2ay + ap$ | f) $35y - 10$ | h) $12d - 3$ | j) $yd + 3d$ |