

**BIG
MISTAKE?**

Find the value of $2x^2$
when $x = 3$

$$x = 3$$

$$2 \times 3 = 6$$

$$6^2 = 36$$

A

**BIG
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Find the value of $x^2 - x$
when $x = -2$

$$x = -2$$

$$-2^2 - -2$$

$$-4 + 2 = -2$$

B

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Simplify

$$2x - 3y + 4x + 2y$$

$$2x + 4x = 6x$$

$$3y + 2y = 5y$$

$$6x - 5y$$

C

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Simplify

$$2x^2 + 3x - x^2 - 2x^2$$

$$2 + 3 - 1 - 2 = 2$$

$$2x^2 + 3x - x^2 - 2x = 2x^2$$

D

Simplify

$$\frac{8a + 4ab - 4a}{2a}$$

$$\frac{4a + 4ab}{2a}$$

$$2a + 4b$$

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Simplify

$$3y^5 \times 5y^3$$

$$3 \times y^5 \times 5 \times y^3$$
$$= 15y^{15}$$

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Simplify

$$(2x^3)^4$$

$$2^4 \times (x^3)^4$$

$$= 8x^{12}$$

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Simplify

$$6y^{-1} \div 12y^{-3}$$

$$\frac{12y^{-3}}{6y}$$
$$= 2y^{-4}$$

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Expand and simplify

$$4(x+1) - 3(x-2)$$

$$4x + 4 - 3x - 6$$

$$= x - 2$$

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Expand

$$xy(2x + 3y)$$

$$2xy^2 + 3xy^2$$

$$= 5xy^2$$

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Factorise completely

$$16ab - 24a$$

$$2(8ab - 12a)$$

$$= 2a(8b - 12)$$

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K

Factorise completely

$$15x^2yz - 45xy^2z$$

$$15(x^2yz - 3xy^2z)$$

$$= 15xyz(x - 3xy)$$

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Expand and simplify

$$(x - 5)(x + 5)$$

$$x^2 - 5x - 5x - 25$$

$$= x^2 - 10x - 25$$

M

Solve

$$\frac{x + 2}{3} = 5$$

$$x + 2 = 15$$

$$x = 13$$

N

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Solve

$$x^2 - 15x = 0$$

$$x(x - 15) = 0$$

$$x - 15 = 0$$

$$x = 15$$

O

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Solve

$$x^2 - x - 12 = 0$$

$$(x - 3)(x + 4) = 0$$

$$x - 3 = 0 \quad x + 4 = 0$$

$$x = 3 \quad x = -4$$

P

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Solve simultaneously

$$3p + 5q = 7$$

$$p - 2q = -5$$

$$p - 2q = -5 \text{ (}\times 3\text{)}$$

$$3p + 5q = 7$$

$$3p - 6q = -15$$

$$-q = -12$$

$$p - 2q - 12 = -5$$

$$p = -29$$

Q

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Solve

$$3 \leq 5x - 2 < 23$$

$$5 \leq 5x \leq 25$$

$$1 \leq x \leq 5$$

R

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Make x the subject of the formula

$$y = \frac{a - x}{b}$$

$$by = a - x$$

$$x = by - a$$

S

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Make x the subject of the formula

$$v = a\sqrt{x}$$

$$\sqrt{x} = \frac{v}{a}$$

$$x = \frac{v^2}{a^2}$$

T