

# SMART START

$$(2x - 5)(2x + 5)$$

	$2x$	$4x^2$	$-10x$
$5$		$10x$	$-25$

|||  $4x^2 + -25$  |||

## Six problem check

14)

18)

22)

28)

30)

32)

### Six problem check

$$14) k^2 + 16k + 64$$

$$18) c^2 - 4$$

$$22) 16 - 48h + 36h^2$$

$$36h^2 - 48h + 16$$

$$28) 9n^2 - 60np + 100p^2$$

$$30) 16d^2 - 169$$

$$32) 9a^4 - 6a^2b^2 + b^4$$

$$14) k^2 + 16k + 64$$

$$16) n^2 - 24n + 144$$

$$18) c^2 - 4$$

$$20) 81x^2 + 54x + 9$$

$$22) 16 - 48h + 36h^2$$

$$24) 144p^2 - 9$$

$$26) m^2 + 14mn + 49n^2$$

$$28) 9n^2 - 60np + 100p^2$$

$$30) 16d^2 - 169$$

$$32) 9a^4 - 6a^2b^2 + b^4$$

$$(3x^2y^4)^3 \quad 3^3x^6y^{12}$$

$$\textcircled{(2x+3)^2}$$

Can't use  
power rule  
in a  
numeral.

# 1 Simplify

$$y^3 y^3 y =$$

- A  $y^9$
- B  $y^7$
- C  $y^{-4}$
- D  $y^3 yy^3$

2 Simplify

$$-\frac{1}{2}(m^2n^4)^2$$

A  $\frac{(m^4n^8)}{8}$

B  $\frac{(m^4n^8)}{4}$

C  $-\frac{(m^4n^8)}{2}$

D  $-\frac{(m^4n^8)}{4}$

3 Simplify

$$[(3^2)^2]^3$$

A  $3^{12}$

B  $\frac{1}{3^{12}}$

C  $3^7$

D  $3^8$

#### 4 Simplify

$$\left(\frac{3bc^2}{4d}\right)^3$$

A  $\frac{3b^3c^6}{4d^3}$

B  $\frac{27b^3c^6}{4d}$

C  $\frac{27b^3c^6}{4d^3}$

D  $\frac{27b^3c^6}{64d^3}$

## 5 Simplify

$$\frac{(4a^{-1})^2}{(2a^4)^2}$$

A  $\frac{16a^{-2}}{2a^8}$

B  $\frac{16a^4}{2a^8}$

C  $\frac{4}{a^{10}}$

D  $\frac{12}{a^{10}}$

6 Find the product

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

A  $x^2 + x - 6$

B  $x^2 - x - 6$

C  $x^2 + x + 6$

7 Find the product

$$-(x+5)(x+2)$$

A  $-x^2 - 7x - 10$

B  $x^2 + 7x + 10$

C  $-x^2 + 7x + 10$

8 Find the product

$$(x-2)(x+2)$$

A  $x^2 + 2x + 4$

B  $x^2 - 2x + 4$

C  $x^2 - 4$

9 Find the product

$$(x - 2)^2$$

A  $x^2 + 4$

B  $x^2 - 4$

C  $x^2 - 4x + 4$

10 Find the sum/difference

$$(x^3 - 3x^2y + 4xy^2 + y^3) - (7x^3 + x^2y - 9xy^2 + y^3)$$

A  $-6x^3 - 4x^2y + 13xy^2 + 2y^3$

B  $-6x^3 - 4x^2y + 13xy^2$

C  $8x^3 - 2x^2y - 5xy^2 + 2y^3$

