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Solve each equation by completing the square.

1) 
$$x^2 - 12x - 4 = 9$$

A) 
$$\{7 + \sqrt{58}, 7 - \sqrt{58}\}$$

B) 
$$\{9 + \sqrt{74}, 9 - \sqrt{74}\}$$

C) 
$$\{-4 + 3\sqrt{11}, -4 - 3\sqrt{11}\}$$

2) 
$$x^2 - 20x + 70 = 6$$

A) 
$$\{20 + 4\sqrt{21}, 20 - 4\sqrt{21}\}$$

B) 
$$\{10 + 2\sqrt{41}, 10 - 2\sqrt{41}\}$$

C) 
$$\{6+2\sqrt{6}, 6-2\sqrt{6}\}$$

Simplify. Your answer should contain only positive exponents.

3) 
$$uv^{4} \cdot 4vu^{3}$$

A) 
$$\frac{12}{v^3}$$

B) 
$$\frac{6}{v^2}$$

C) 
$$4u^4v^5$$

A) 
$$\frac{12}{v^3}$$
 B)  $\frac{6}{v^2}$  C)  $4u^4v^5$  D)  $\frac{12u^3}{v^3}$ 

4) 
$$(2x^{-3})^2 \cdot x^{-1}$$

A) 
$$\frac{y^5}{x^4}$$

A) 
$$\frac{y^5}{x^4}$$
 B)  $\frac{1}{x^8y^{12}}$ 

C) 
$$\frac{4}{x}$$

C) 
$$\frac{4}{x^7}$$
 D)  $512x^{15}y^9$