

(1) 1. Approximate to four decimal places: $\sqrt[19]{7} \approx 1.1078$ (Check: $1.1078^{19} \approx 6.99 \approx 7$)

(1) 2. Select one: $(x + 3y)^2 =$

- A. $x^2 + 3y^2$ B. $x^2 + 9y^2$ **C.** $x^2 + 6xy + 9y^2$ D. $x^2 + 9xy + 9y^2$

(2) 3. Write with positive exponents and simplify: $\frac{5a^{-2}b^3}{(a^{-2}b)^{-3}}$

SHOW WORK!

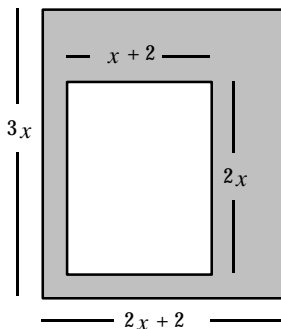
$$\frac{5a^{-2}b^3}{(a^{-2}b)^{-3}} = \frac{5b^3(a^{-2}b)^3}{a^2} = \frac{5b^3a^{-6}b^3}{a^2} = \frac{5b^3b^3}{a^2a^6} = \frac{5b^6}{a^8}$$

(2) 4. Solve $3x^2 + 15x = 0$.
SHOW WORK!

$$\begin{array}{l} 3x^2 + 15x = 0 \\ 3(x + 5) = 0 \\ 3x = 0 \quad \parallel \quad x + 5 = 0 \\ x = 0 \quad \parallel \quad x = -5 \end{array}$$

$x = 0, -5$

(2) 5. Write an expression, in factored form, for the shaded portion of the figure. (Select one)



$$\begin{aligned} &3x(2x + 2) - 2x(x + 2) \\ &= 6x^2 + 6x - 2x^2 - 4x \\ &= 4x^2 + 2x \\ &= 2x(2x + 1) \end{aligned}$$

- A. $2x(2x - 1)$
B. $4x^2 + 10x$
C. $2x(2x + 1)$
D. $x(2x + 1)$

(2) 5. Solve the system. Which is true about the value of y in the solution (x, y) ? (Select one)

$$\begin{aligned} &= 3 - 1 \\ y &= 2x + 6 \end{aligned}$$

Set the equations equal to each other:

$$3x - 1 = 2x + 6$$

$$x - 1 = 6$$

$$x = 7$$

Resubstitute:

$$x = 7 \Rightarrow y = 3x - 1$$

$$x = 7 \Rightarrow y = 3 \cdot 7 - 1 = 20$$

- A. $y = 2$
B. $y = 20$
C. $y = 7$
D. $y = 5$