

Quiz 25.3

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Simplify. Your answer should contain only positive exponents.

1) $a \cdot 2a^3$

- A) $2a^4$ B) $16a^3$
 C) 4 D) $16a^2$

2) $4n^3 \cdot 2n$

- A) $\frac{12}{n}$ B) $\frac{2}{n^3}$
 C) $8n^4$ D) $6n^7$

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

- A) $3y^6x$ B) $16x^3y$
 C) $12x^4y^5$ D) $-\frac{3x^7}{y^2}$

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

- A) $81x^{16}$ B) $8x^9$
 C) $4x^4$ D) x^{12}

5) $(x^{-1})^2$

- A) $\frac{1}{x^2}$ B) $27x^{12}$
 C) $\frac{9}{x^4}$ D) x^8

6) $(2a^4b^2)^{-2} \cdot a^2b^2$

- A) $\frac{1}{4a^6b^2}$ B) $2b^5a^{10}$
 C) $256a^4b^4$ D) $\frac{2a^2}{b^5}$

7) $\frac{3y^3}{x^{-3}y^3}$

- A) $\frac{3y}{4x}$ B) $\frac{2}{y^3}$
 C) $3x^3$ D) $\frac{1}{xy^2}$

8) $\frac{3u^3v^{-4}}{u^2v^{-2}}$

- A) $\frac{1}{u^2v^7}$ B) $\frac{3u}{v^2}$
 C) $\frac{3}{u}$ D) $\frac{1}{2v^8u^4}$

Solve for $y = mx + b$, and state the slope and the y - intercept.

9) $4x - y = 1$

- A) $y = 4x - 1$, $m = 4$, $b = -1$
 B) $y = -x + 4$, $m = -1$, $b = 4$
 C) $y = 2x + 4$, $m = 2$, $b = 4$
 D) $y = -2x + 4$, $m = -2$, $b = 4$

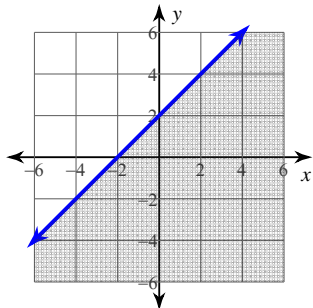
10) $7x - 3y = 21$

- A) $y = -7x - \frac{7}{3}$, $m = -7$, $b = -\frac{7}{3}$
 B) $y = \frac{5}{3}x - \frac{7}{3}$, $m = \frac{5}{3}$, $b = -\frac{7}{3}$
 C) $y = \frac{7}{3}x - 7$, $m = \frac{7}{3}$, $b = -7$
 D) $y = -\frac{7}{3}x - 7$, $m = -\frac{7}{3}$, $b = -7$

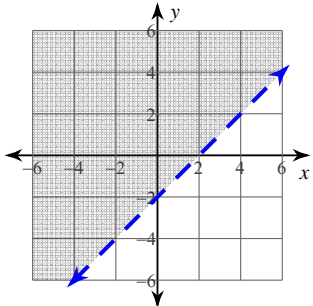
Sketch the graph of each linear inequality.

11) $y \leq x + 2$

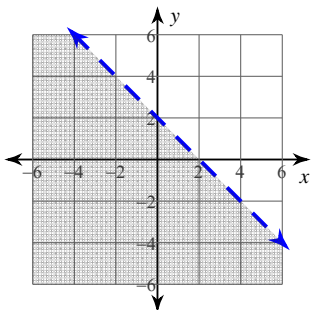
A)



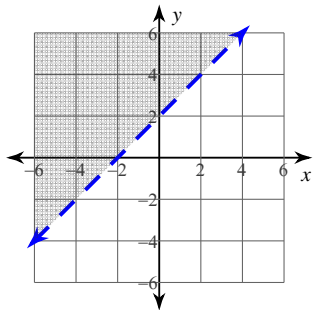
B)



C)

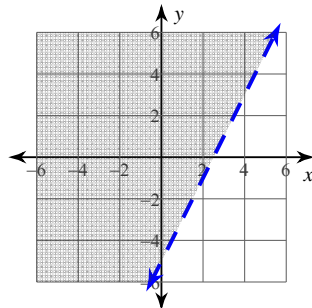


D)

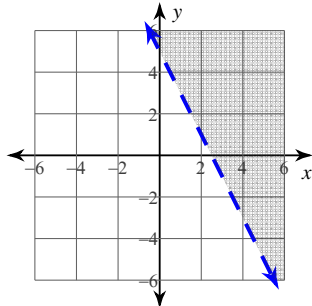


12) $y > -2x + 5$

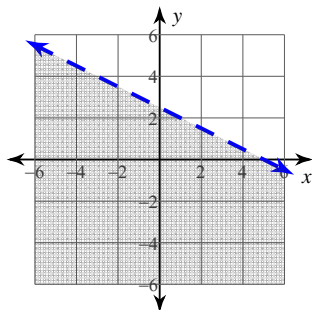
A)



B)



C)



D)

