

**Homework 25.3**

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**Simplify. Your answer should contain only positive exponents.**

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

2)  $4n^{-3} \cdot 3n^4$

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

4)  $b \cdot 3b^3$

5)  $2m^{-3}n^4 \cdot 3m^3 \cdot -2n^{-3}$

6)  $2xy^{-1} \cdot 4y^{-3}$

7)  $(3x^3)^2$

8)  $(2n^{-1})^2$

9)  $(4v^4)^3$

10)  $(2x)^2$

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

12)  $2u^{-4}v^{-4} \cdot (2u^4v^3)^{-3}$

13)  $\frac{x^{-3}y^{-2}}{2yx^{-3}}$

14)  $\frac{a^3b^2}{2a^3b^3}$

15)  $\frac{3x^2}{x^{-4}}$

16)  $\frac{2u^3v^{-1}}{2u^3}$

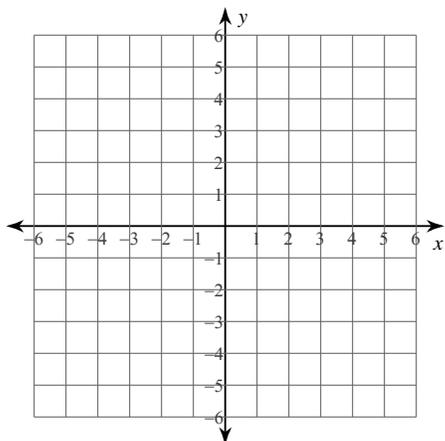
**Solve for  $y = mx + b$ , and state the slope and the  $y$  - intercept.**

17)  $15x + y = 8$

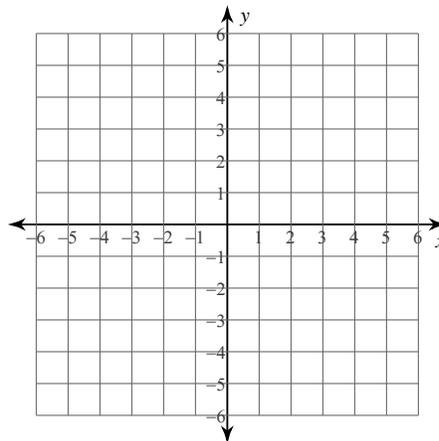
18)  $13x + 4y = 20$

Sketch the graph of each linear inequality.

19)  $y < -2x + 4$



20)  $y \leq \frac{3}{4}x + 5$



## Answers to Homework 25.3

1)  $9x^2$

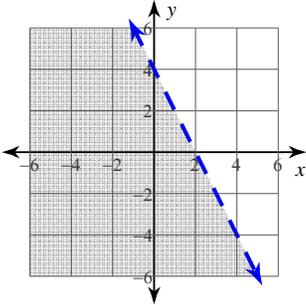
5)  $-12n$

9)  $64v^{12}$

13)  $\frac{1}{2y^3}$

17)  $y = -15x + 8$ ,  $m = -15$ ,  $b = 8$

19)



2)  $12n$

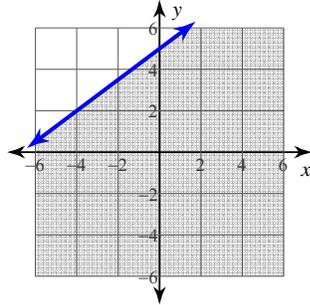
6)  $\frac{8x}{y^4}$

10)  $4x^2$

14)  $\frac{1}{2b}$

18)  $y = -\frac{13}{4}x + 5$ ,  $m = -\frac{13}{4}$ ,  $b = 5$

20)



3)  $24r^8$

7)  $9x^6$

11)  $\frac{2}{x^{11}y^3}$

15)  $3x^6$

4)  $3b^4$

8)  $\frac{4}{n^2}$

12)  $\frac{1}{4u^{16}v^{13}}$

16)  $\frac{1}{v}$