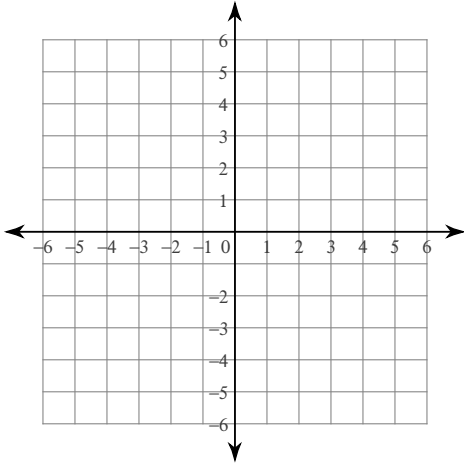


Summer Assignment

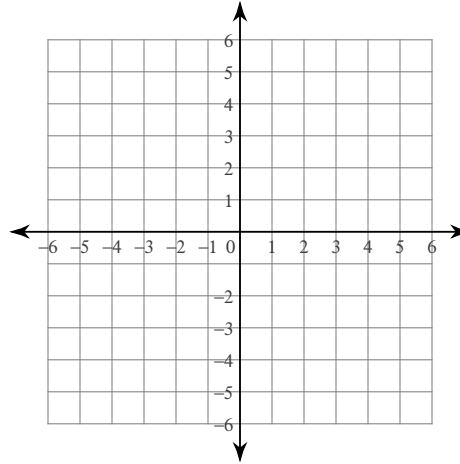
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Graph each equation.

1) $y = -|x| + 1$

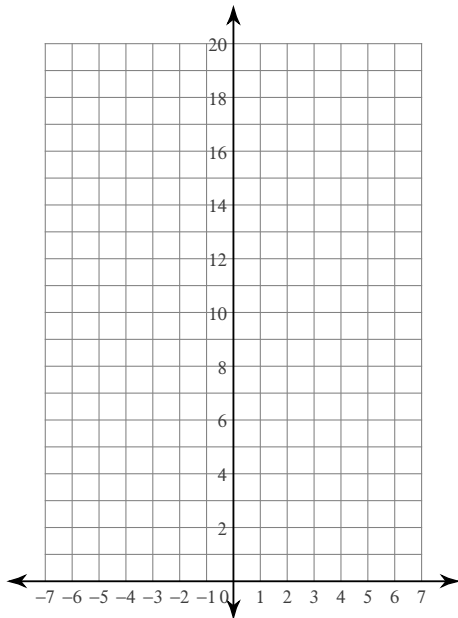


2) $y = |x - 4| + 3$

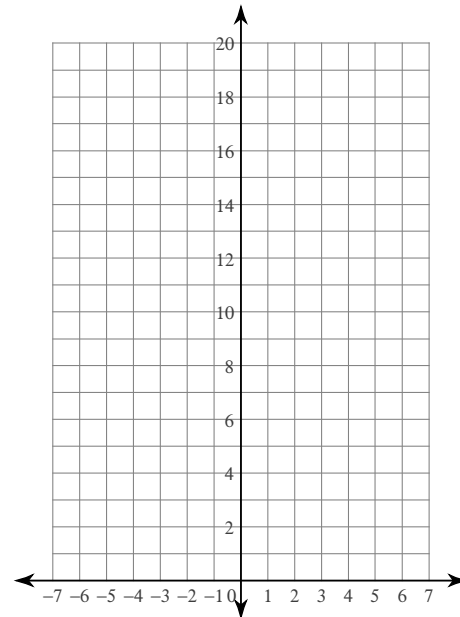


Sketch the graph of each function.

3) $y = 2 \cdot \left(\frac{1}{3}\right)^x$

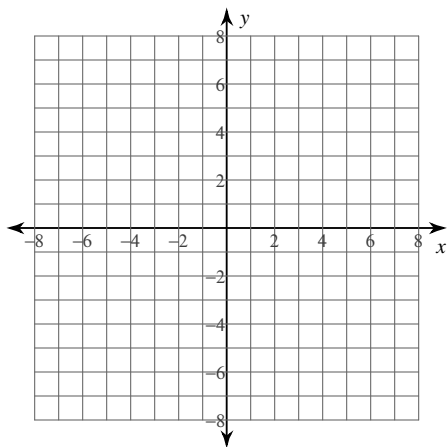


4) $y = 3 \cdot 2^x$

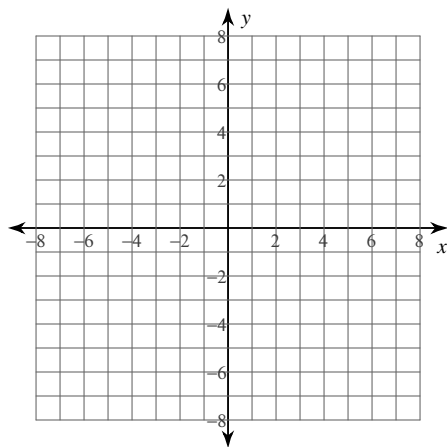


Identify the domain and range of each. Then sketch the graph.

5) $y = \log_3(x + 3) + 4$

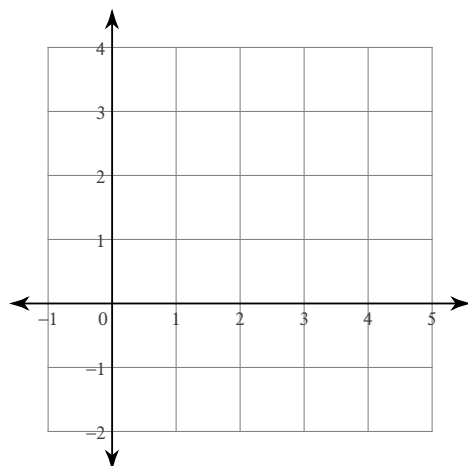


6) $y = \log_3(x + 6) + 4$

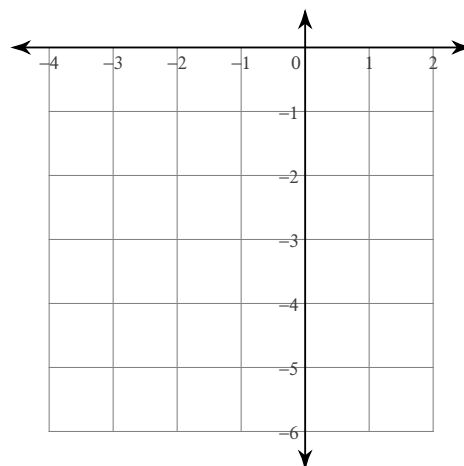


Sketch the graph of each function.

7) $y = -x^2 + 6x - 6$

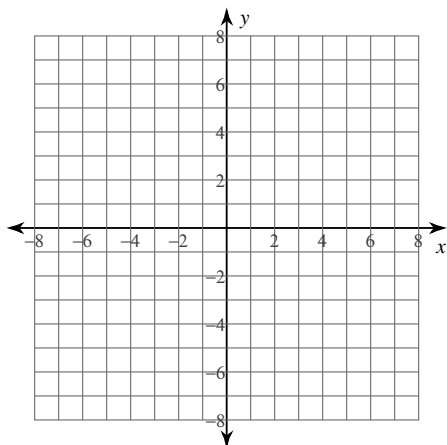


8) $y = -x^2 - 2x - 2$

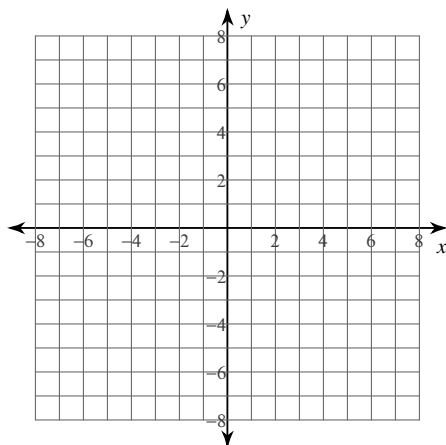


Identify the vertex, axis of symmetry, and min/max value of each. Then sketch the graph.

9) $y = 2x^2 - 12x + 15$

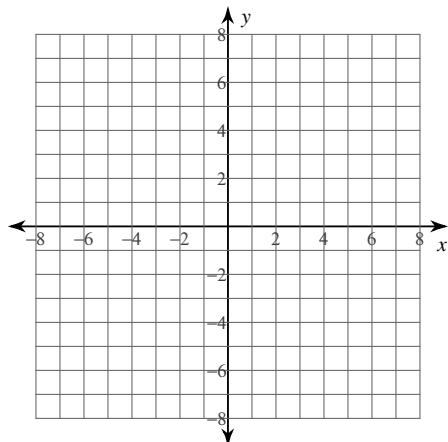


10) $y = -x^2 - 4x - 3$

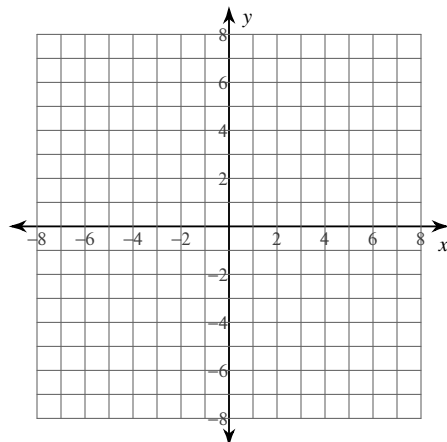


Sketch the graph of each function.

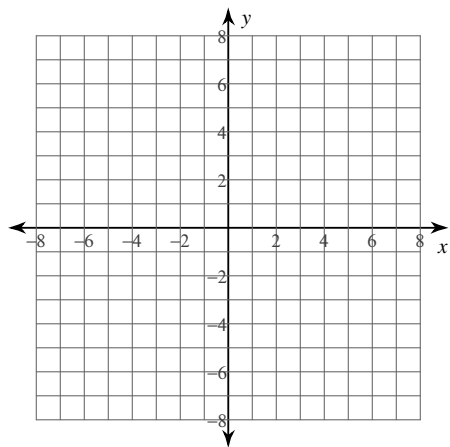
11) $y = \sqrt{x} + 3$



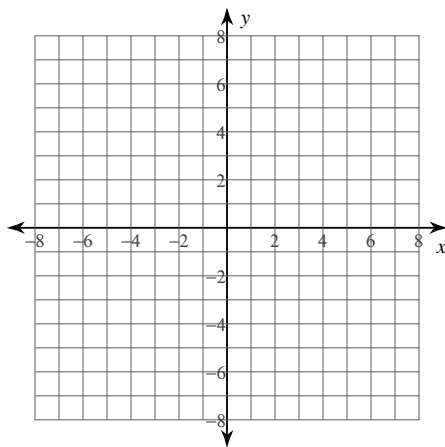
12) $y = 5 + \sqrt{x}$



13) $y = \sqrt[3]{x+5}$

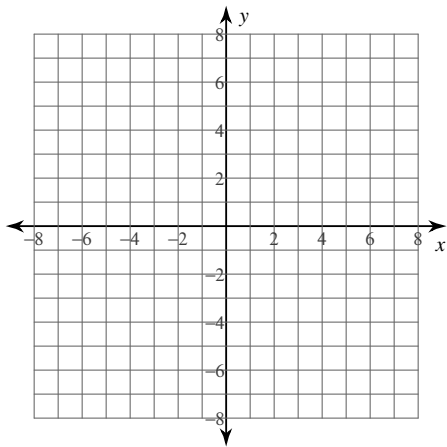


14) $y = 3\sqrt[3]{x+4} - 1$

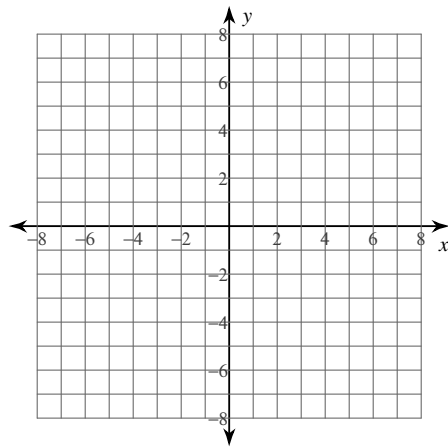


Graph each function.

15) $f(x) = \frac{-x^3 - 3x^2}{x^3 - 2x^2 - 3x}$



16) $f(x) = \frac{x-1}{x^2-x-6}$



Factor by grouping.

17) $21n^3 - 28n^2 + 15n - 20$

18) $28a^3 - 12a^2 + 35a - 15$

19) $36v^3 + 42v^2 - 42v - 49$

Factor each completely.

20) $x^2 - 7x$

21) $b^3 - 18b^2 + 80b$

22) $6x^3 - 24x^2$

23) $n^4 + 4n^3 - 45n^2$

24) $n^3 - 6n^2 - 27n$

25) $25x^2 - 9$

26) $n^2 - 4n + 4$

27) $m^2 - 1$

Solve each equation.

28) $6 + \log_9 -7n = 8$

29) $-2 + \log_6 (b - 8) = -3$

30) $\log_2 3x^2 - \log_2 3 = 4$

31) $\log_5 (x^2 + 1) + \log_5 4 = 3$

Solve each equation. Round your answers to the nearest ten-thousandth.

32) $17^{n+1} + 10 = 16$

33) $14^{a+6} - 10 = 40$

34) $-5 \cdot 5^{k-9.8} = -6$

Solve each system by elimination.

35) $3x + 9y = 3$
 $-6x - 18y = 0$

36) $12x - 12y = -24$
 $-3x + 3y = 6$

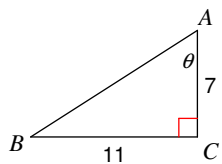
Solve each system by substitution.

37) $6x + 7y = 0$
 $x + 3y = 11$

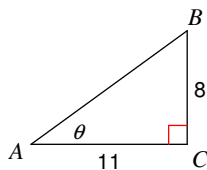
38) $6x + 3y = 0$
 $2x + y = 0$

Find the measure of each angle indicated. Round to the nearest tenth.

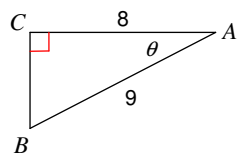
39)



40)

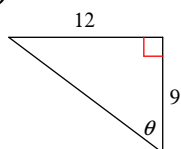


41)

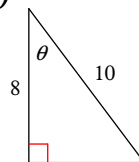


Find the value of the trig function indicated.

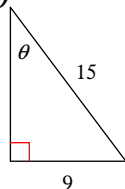
42) $\sin \theta$



43) $\cos \theta$



44) $\tan \theta$



Evaluate each function.

45) $h(a) = 2a + 1$; Find $h(a - 3)$

46) $h(t) = -2t + 1$; Find $h(t^2)$

47) $h(x) = 4^{3x} - 1$; Find $h(4 + x)$

Solve each equation.

$$48) 512 = (x + 27)^{\frac{3}{2}}$$

$$49) \frac{1}{8} = (n + 5)^{-\frac{3}{2}}$$

$$50) -16 = -4m^{\frac{1}{3}}$$

Simplify each expression.

$$51) \frac{\frac{3}{5} + \frac{a^2}{25}}{a}$$

$$52) \frac{\frac{x}{9}}{\frac{16}{x^2} - \frac{9}{4}}$$

$$53) \frac{\frac{3}{4}}{\frac{4}{a} + \frac{1}{3}}$$

$$54) \frac{3}{\frac{x^2}{25} - \frac{x}{3}}$$

Simplify.

$$55) \frac{2}{4 + \sqrt{5}}$$

$$56) \frac{3}{4 + 8\sqrt{5}}$$

$$57) \frac{\sqrt{5} + \sqrt{2}}{3 - 4\sqrt{5}}$$

$$58) \sqrt{576u^4v^4}$$

$$59) \sqrt{48u^2v}$$

$$60) \sqrt{250x^4y}$$

$$61) \sqrt{12x^5y^3}$$