

Name: _____

Date: _____

Radical Functions Quiz

Matching

Match the functions to their corresponding graphs.

A $f(x) = 4\sqrt{2(x-7)} + 6$

D $f(x) = 4\sqrt{2(x+6)} - 7$

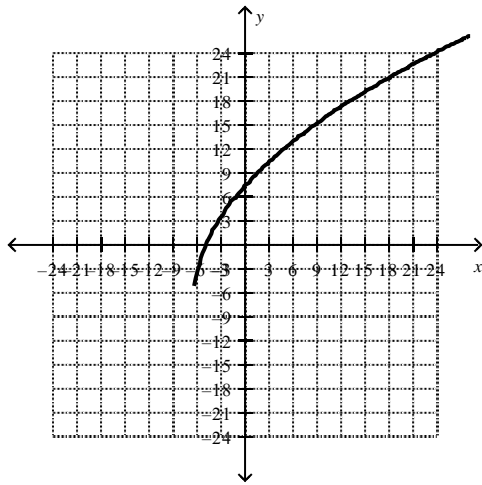
B $f(x) = 2\sqrt{4(x-7)} + 6$

E $f(x) = 4\sqrt{2(x-7)} - 11$

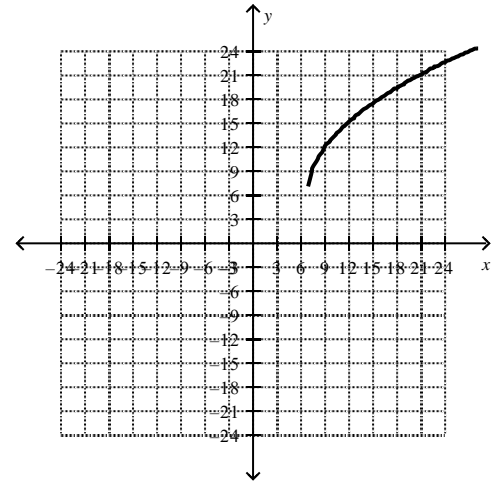
C $f(x) = 2\sqrt{4(x+6)} - 7$

F $f(x) = 2\sqrt{4(x+6)} - 11$

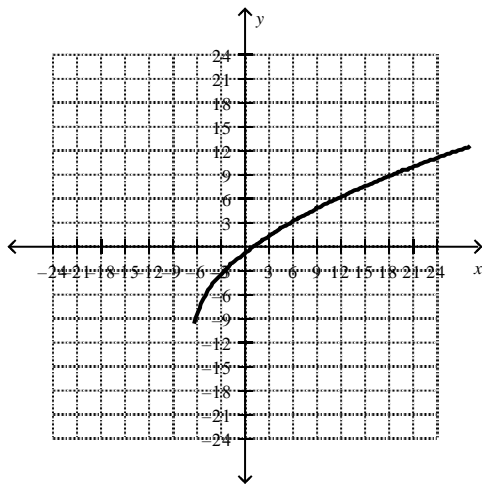
_____ 1.



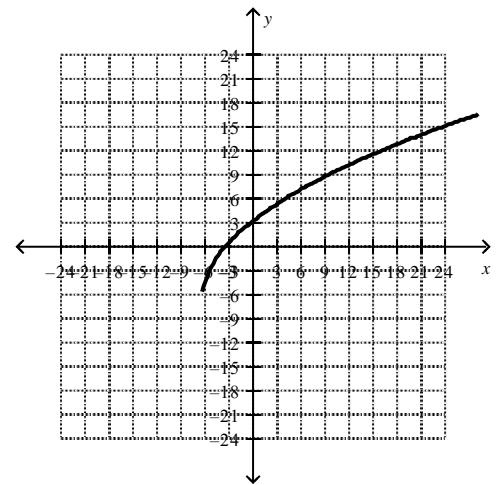
_____ 3.



_____ 2.

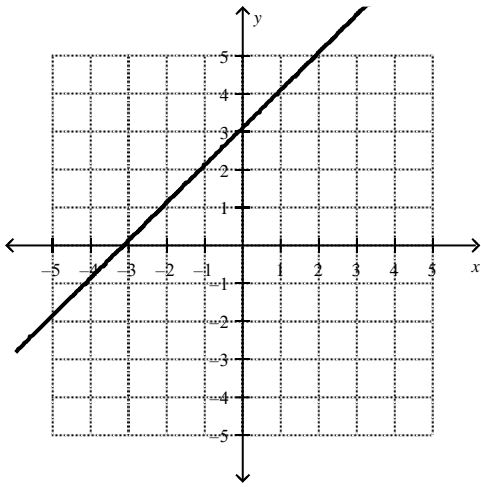


_____ 4.

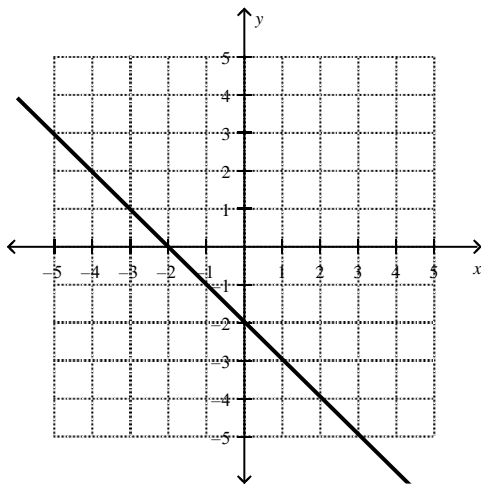


5. Using each graph of $y = f(x)$, sketch the graph of $y = \sqrt{f(x)}$.

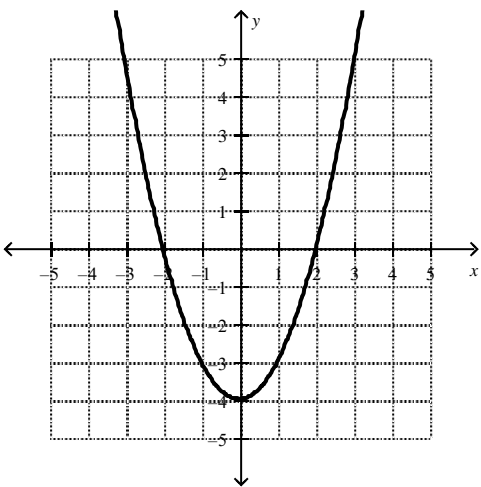
a)



b)

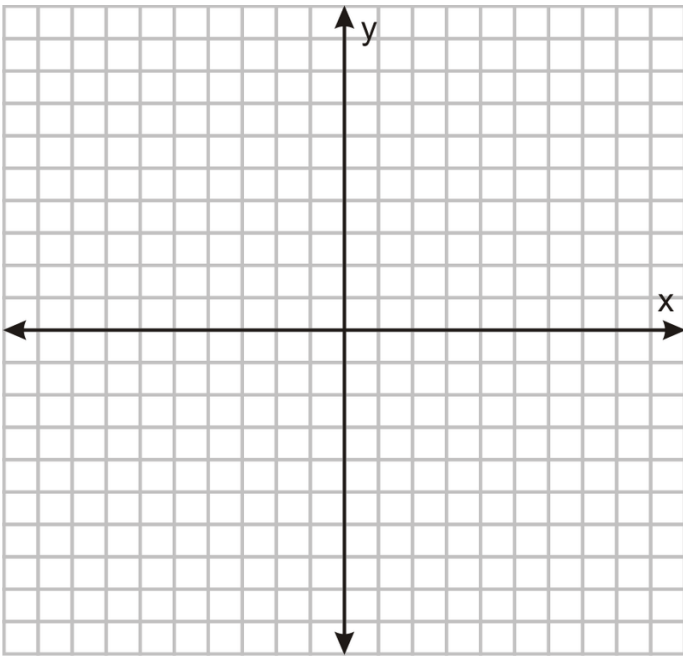


c)



6. Solve the equation $3\sqrt{2x+4} + 9 = 12$, $x \geq -2$, algebraically.

7. Solve the equation $\sqrt{3x-6} = 12$ graphically.



8. A parachute manufacturing company uses the formula $d = 3.69\sqrt{\frac{m}{v^2}}$ to model the diameter, d , in meters, of its dome shaped circular parachutes so that an object with mass, m , in kilograms, has a descent velocity, v , in meters per second, under the parachute. What is the landing velocity for a 20-kg object using a parachute that is 3.2m in diameter? Express your answer to the nearest meter per second.

Radical Functions Quiz Answer Section

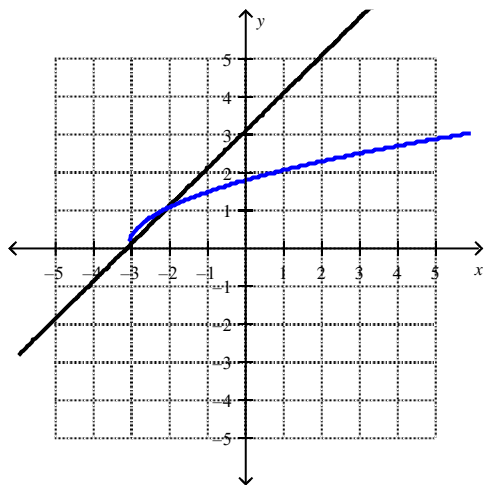
MATCHING

1. ANS: D PTS: 1 DIF: Average OBJ: Section 2.1
NAT: RF13 TOP: Radical Functions and Transformations
KEY: graph | transformations | translations | vertical translation | horizontal translation
2. ANS: F PTS: 1 DIF: Average OBJ: Section 2.1
NAT: RF13 TOP: Radical Functions and Transformations
KEY: graph | transformations | translations | vertical translation | horizontal translation
3. ANS: B PTS: 1 DIF: Average OBJ: Section 2.1
NAT: RF13 TOP: Radical Functions and Transformations
KEY: graph | transformations | translations | vertical translation | horizontal translation
4. ANS: C PTS: 1 DIF: Average OBJ: Section 2.1
NAT: RF13 TOP: Radical Functions and Transformations
KEY: graph | transformations | translations | vertical translation | horizontal translation

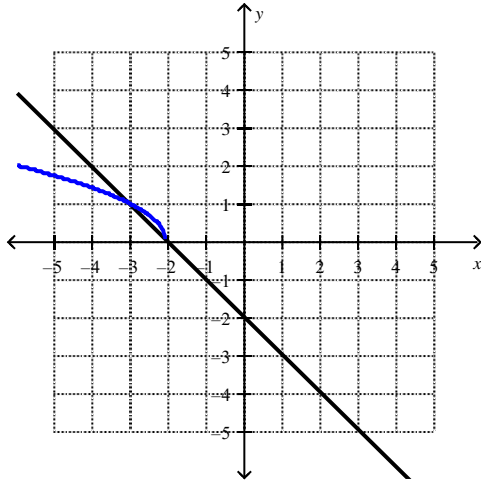
5. ANS:

The graph of $y = f(x)$ is shown in black, and the graph of $y = \sqrt{f(x)}$ is shown in blue.

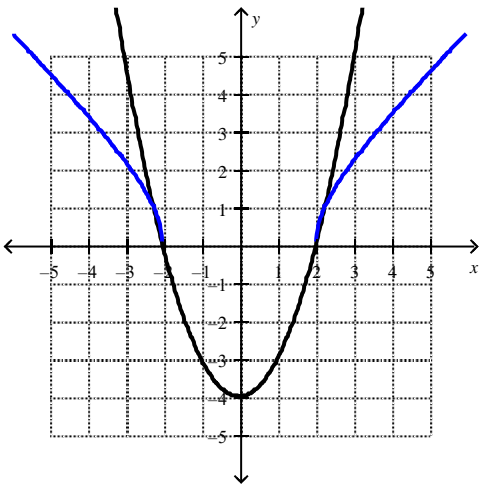
a)



b)



c)



PTS: 1

DIF: Average

OBJ: Section 2.2 NAT: RF13

TOP: Square Root of a Function

KEY: graph | square root of a function

6. ANS:

$$3\sqrt{2x+4} + 9 = 12$$

$$3\sqrt{2x+4} = 3$$

$$\sqrt{2x+4} = 1$$

$$2x+4 = 1$$

$$2x = -3$$

$$x = -\frac{3}{2}$$

PTS: 1

DIF: Average

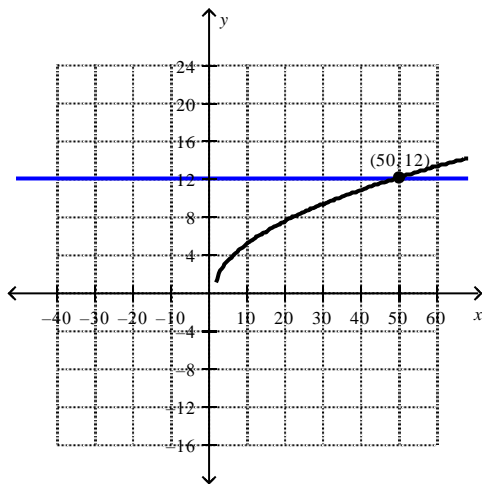
OBJ: Section 2.3

NAT: RF13

TOP: Solving Radical Equations Graphically

KEY: algebraic solution

7. ANS:



PTS: 1

DIF: Average

OBJ: Section 2.3

NAT: RF13

TOP: Solving Radical Equations Graphically

KEY: graphical solution

8. 5 m/s