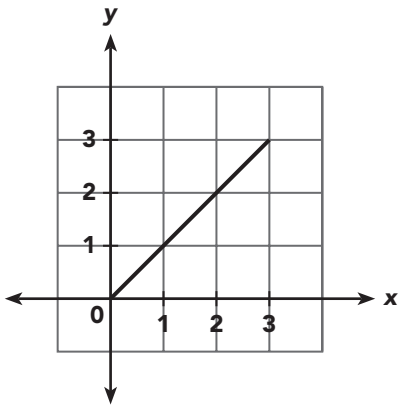
Name: _____ Date: _____

Lesson 5.2 Representing Direct Proportion Graphically

Tell whether each graph represents a direct proportion. If so, find the constant of proportionality.

1.



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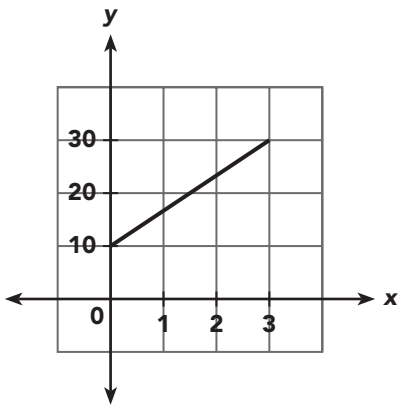
2.



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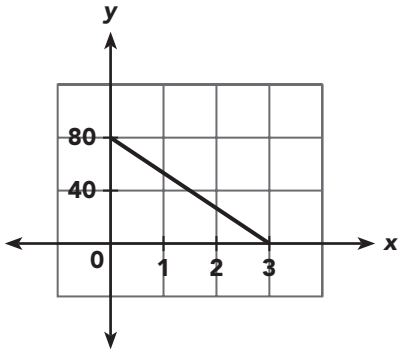
3.



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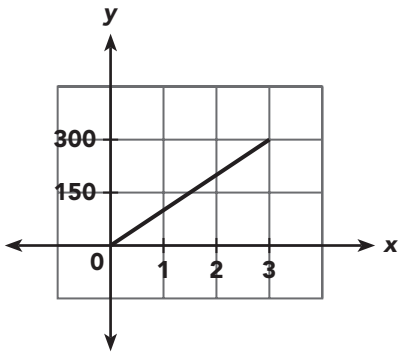
4.



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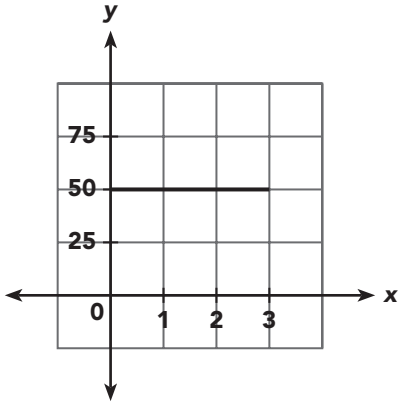
5.



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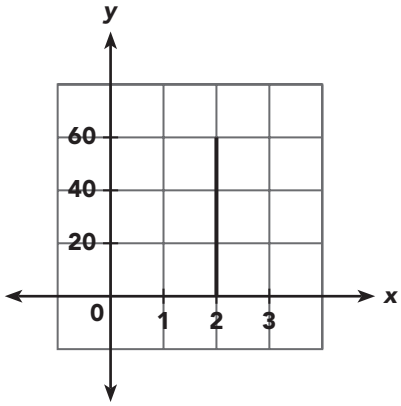
6.



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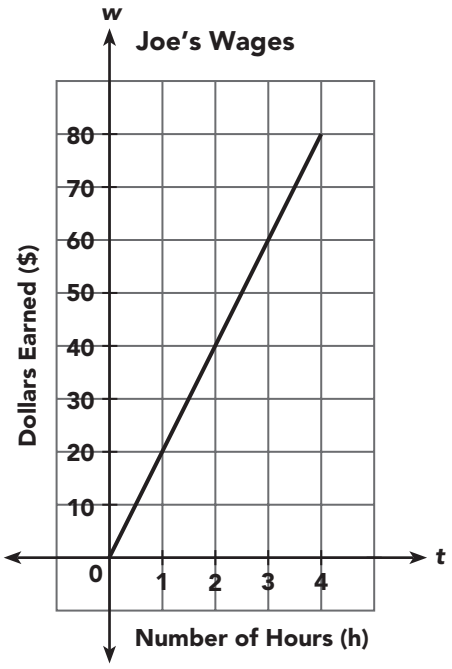
Solve. Show your work.

7. The amount of money Joe earns is directly proportional to the number of hours he works. The graph shows the amount of money, *w* dollars, Joe earns in *t* hours.



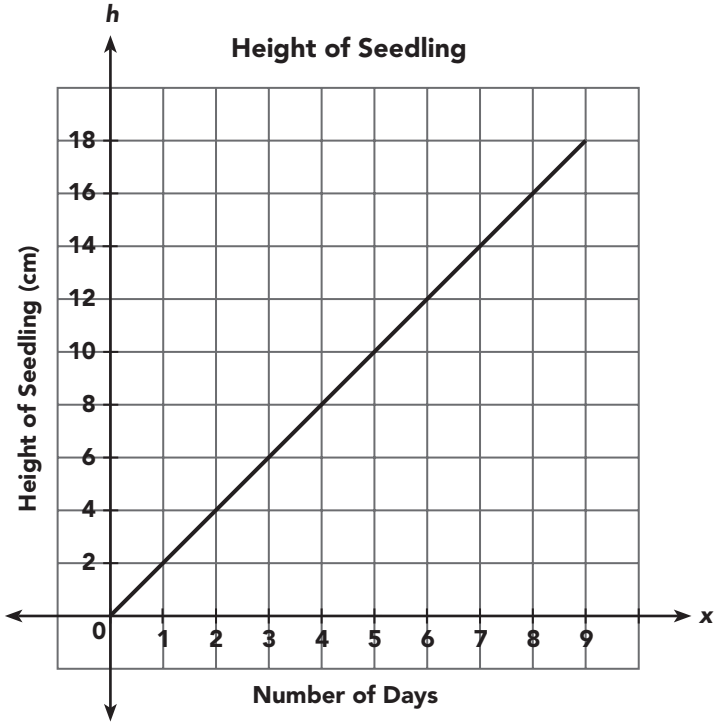
a) Find the constant of proportionality. What does this value represent in this situation?

b) How much does Joe earn if he works 3 hours?

c) How long does Joe work if he earns $90?

8. The height of a seedling is directly proportional to the number of days since it was planted. The graph shows the height of the seedling, *h* centimeters, after *x* days.

a) Find the constant of proportionality. What does this value represent in this situation?



b) Write the direct proportion equation.

c) Explain what the point (5, 10) represents in this situation.

d) What is the height of the seedling after 3 days? After one week?

e) How many days will it take for the seedling to reach a height of at least 18 centimeters?

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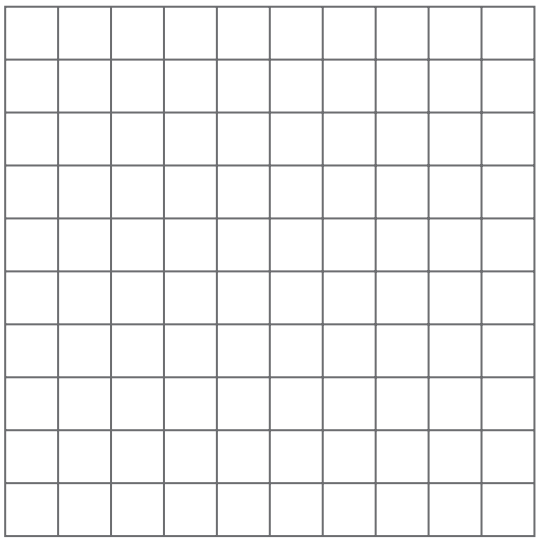
9. The amount of Japanese yen you get depends on the number of U.S. dollars you exchange. Graph the relationship between *y* Japanese yen and *x* U.S. dollars. Use 1 unit on the horizontal axis to represent 1 U.S. dollar and 1 unit on the vertical axis to represent 80 Japanese yen.

U.S. dollars (*x*)	0	2	4	6	8
Japanese yen (*y*)	0	160	320	480	640



a) Does the amount of Japanese yen vary directly with the amount of U.S. dollars?

b) What is the exchange rate when you convert U.S. dollars to Japanese yen?

c) Write the direct proportion equation.

d) Yuki exchanges 480 Japanese yen for U.S. dollars. What amount in U.S. dollars does she receive?

e) Justin exchanges 9 U.S. dollars for Japanese yen. What amount in Japanese yen does he receive?