✔ **Congratulations! You passed!**

Grade	Latest Submission	To pass 70% or	
received 100%	Grade 100%	higher	

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1. In the training set below, what is $x_4^{(3)}$? Please type in the number below (this is an integer such as 123, no decimal points).

1 / 1 point

Size in feet²	Number of bedrooms	Number of floors	Age of home in years	Price ($) in $1000's
X_1	X_2	X_3	X_4	
2104	5	1	45	460
1416	3	2	40	232
1534	3	2	30	315
852	2	1	36	178
...	...	...	...	...

> 30

✔ **Correct**
Yes! $x_4^{(3)}$ is the 4th feature (4th column in the table) of the 3rd training example (3rd row in the table).

2.

1 / 1 point

Which of the following are potential benefits of vectorization? Please choose the best option.

○ It makes your code run faster

○ It can make your code shorter

○ It allows your code to run more easily on parallel compute hardware

⦿ All of the above

✔ **Correct**
Correct! All of these are benefits of vectorization!

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3. True/False? To make gradient descent converge about twice as fast, a technique that almost always works is to double the learning rate $alpha$.

1 / 1 point

○ True

⦿ False

✔ **Correct**
Doubling the learning rate may result in a learning rate that is too large, and cause gradient descent to fail to find the optimal values for the parameters w and b.