

Blackboard

Creating "Fill-in-the-Blank" Questions

Fill-in-the-blank questions offer a useful alternative to multiple-choice questions because it prevents students from simply guessing on an answer. In this short handout, I will walk you through the process of creating questions and indicating answers. I'll also provide resources that you might want to review.
Setting Up Your Quiz:

Step 1 – Create a Quiz

You can create a quiz by clicking on "tests, surveys, and pools"

Create a fill in the blank question

Type in your question text and then the answer, using either the exact match, contains or pattern match option.

If you use pattern match, the you can check the pattern to ensure it is set up correctly

Step 2 – Setting Up Acceptable Answers

a. Exact match (Specify if it needs to be case sensitive)

b. Contains, which would allow for mis-spellings (Specify if it needs to be case sensitive)

c. Pattern match is an option that allows you to specify a variety of correct answer responses.

- **Literal** – any character(s) used in an exact search
- **Meta Characters** – special characters that have a unique meaning and aren't considered literals

. the period signifies **any character**
example, c.t matches cat, cut, cit, cot, c&t,

| this is a vertical bar that separates **alternatives**
example, gray|grey means that either term is correct or gr(a|e)y
example, [S|s]tarn means the name can be spelled with a capital or lower case letter

* the asterisk means that none, one or more of the preceding characters could or need not be there (**zero or more of preceding characters**)

example, mn*o means the answer could be o, mo, no, mno, mmo, mmno

example, me* means the answer could be m, me, meeeee, meeeeeeeee

note - * is the same as {0,}

+ the plus sign means that there are one or more of the preceding **characters (one or more of preceding characters)**

example, mn+o means the answer could be mno, mnno, mmmno

example, he+ means the answer could be he, hee, heeee, but not just h

note - + is the same as {1,}

? the question mark means that the preceding character is optional (**zero or one of preceding characters**)

e.g. `dinn?er` means the answer could be diner or dinner

() this is a marked sub-expression; it defines or captures a group

example, `gr(a|e)y` means either term within the brackets is correct

[] - brackets match a single character; it sets a range

Example, `[abc]` means either an a b or c

A dash inside the brackets, e.g., `[a-z]`, matches any lowercase letter from a to z

`[abw-z]` matches any single a b w x y z

`[0-9]` means any digit between 0 and 9

{ } - the parenthesis matches the preceding element a number of times (**quantifier**)

Example, a `{2,4}` means the answer could be aa, aaa, aaaa

Example, a `{5}` means exactly five times, a `{5,}` means five or more times

Example, a `[,3]` means three or less times

\ - this is an escape sequence that changes a "meta character" to a literal.

example, `=average\((b2:b10\)|=avg\((b2:b10\)`

example, `7\.{1,}`

\s this is used for a space

^ begin of the sequence

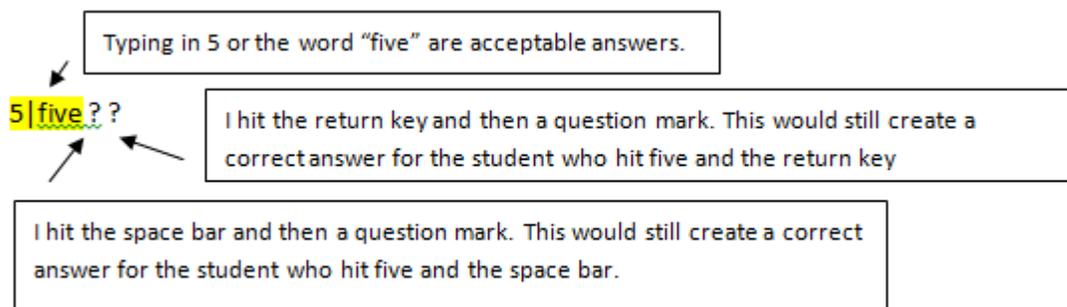
\$ end of the sequence

Example, `^c[aou]t$`

Complex expressions – these combine literals and meta characters in complex expressions

Sample question: How many elements does the data set contain?

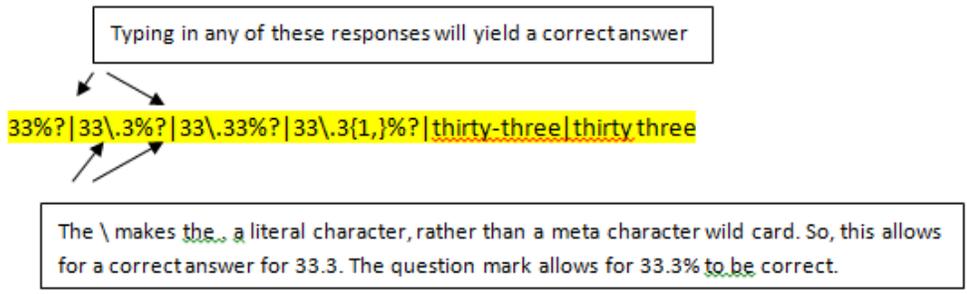
Pattern match answer: `5|five??`



You could also modify to `5|(F|f)ive` to accept a capital or lower case letter

Sample question: What percentage of observations are C and 2?

Pattern match answer: 33%?|33\.3%?|33\.33%?|33\.3{1,}%?|thirty-three|thirty three

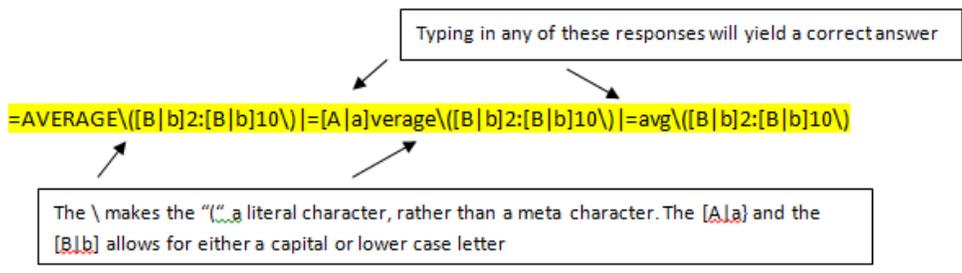


Note that the {1,} would mean that an answer of 33.33333 would be accepted as correct because it denotes that as many a one or more threes can follow.

Sample question: What is the exact Excel formula for calculating the average for the data in cells B2 to B10?

Pattern match answer:

=AVERAGE\([B|b]2:[B|b]10\)|=[A|a]verage\([B|b]2:[B|b]10\)|=avg\([B|b]2:[B|b]10\)



Common Quiz Type questions – Here are some patterns that match common variations in student responses.

Q1 - What function should be used to calculate the average fuel efficiency rating for city driving?

Answer: =AVERAGE(D2:D11)

Pattern match answer:

=AVERAGE\([D|d]2:[D|d]11\)|=[A|a]verage\([D|d]2:[D|d]11\)|=avg\([D|d]2:[D|d]11\)

Q2 – On average, how much higher is the fuel efficiency rating for highway driving as compared to city driving?

Answer : 7.9

Pattern match answer:

7.9 ?|7.90 ?|7.9 MPG ?|7.90 MPG ?|8 ?|8 MPG ?|7.9 mpg ?|7.90 mpg ?|8 mpg

Q3 – What percentage of cars has four-cylinder engines?

Answer : .3

Pattern match answer:

0.3 ?|0.30 ?|.3 ?|.30 ?|30% ?

Q4 – How many elements does this data set contain?

Answer : 7

Pattern match answer:

7 ?|[S|s]even ?|7.0 ?|7.00 ?|7 [E|e]lements ?|[S|s]even [E|e]lements

Q5 – Is Campus setting a quantitative or categorical variable

Answer : Categorical

Pattern match answer:

[C|c]ategorical ?|[C|c]ategorical [V|v]ariable ?|[C|c]ategor.... ?|[C|c]ategor....? [V|v]ariable ?

Q6 – What percentage of the colleges and universities has a city: Midsize campus setting

Answer: 0.43, .428

Pattern match answer:

.43 ?|0.43 ?|.428 ?|0.428 ?|.42 ?|43% ?|42% ?|42.8% ?

Q7 –Construct a bar graph showing vehicles produced by automobile manufacturer using the 2007 data. Is this graph based on cross-sectional or time series data?

Answer: Cross-sectional

Pattern match answer:

[C|c]ross-[S|s]ectional ?|[C|c]ross [S|s]ectional ?|[C|c]ross-[S|s]ectional [D|d]ata ?|[C|c]ross [S|s]ectional [D|d]ata ?

Step 3 – Provide Feedback

The system allow you to type in your detail feedback and decide when the feedback is released to students (immediately, at the end of the week, etc.)

Resources:

Blackboard Help Center – Blackboard offers a useful online ‘help center.’ You can read about “fill in the blank” questions at this URL: https://help.blackboard.com/en-us/Learn/9.1_SP_10_and_SP_11/Instructor/070_Tests_Surveys_Pools/100_Question_Types/Fill_in_the_Blank_Questions

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