

Questions 2-6

Question 2

1 point possible (graded)

If you see `#i2.718281828459045` appear in the interaction pane, it means:

- ☐ It's an imaginary number.
- ☐ Someone just sent a strange tweet.
- ☒ It's a number very close to `2.718281828459045`. ✓
- ☐ I thought you said there wouldn't be much math!

Explanation

Because computers are finite, DrRacket displays irrational numbers as inexact numbers by adding `#i` to the front.

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Answers are displayed within the problem

Question 3

1 point possible (graded)

Which of the following are expressions:

- ☐ `sqr`
- ☒ `(+ 2 3)` ✓
- ☐ `+`
- ☒ `(sqrt 2)` ✓
- ☒ `#i1.4142135623730951` ✓
- ☒ `1` ✓
- ☐ `)`

Explanation

At this point in the course an expression is either a value, or of the form `(<primitive> <expression> ...)`. We will shortly add to our vocabulary of expressions.

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Question 4

1 point possible (graded)

Which of the following are values:

☐ sqr

☐ $(+ 2 3)$

☐ $+$

☐ $(\text{sqr } 2)$

☒ $\#i1.4142135623730951$ ✓

☒ 1 ✓

☐ $)$

Explanation

Examples of values are numbers, strings, and images. Consult the language tab for more information on values and how to form expressions.

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Question 5

1 point possible (graded)

What would be the result of evaluating the following expression:

$(/ (* 2 3) (- 3 1))$

☐ 18

☐ 6

☐ 2

☒ 3 ✓

Explanation

Evaluating $(* 2 3)$ produces 6, and evaluating $(- 3 1)$ produces 2. 6 divided by 2 is 3.

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Question 6

1 point possible (graded)

Recall that the average of a set of numbers is the sum of the numbers divided by how many numbers there are.

Which of these expressions produces the average of the numbers 4, 6.2 and -12? Check ALL that are correct.

☐ $(/ 3 (+ 6.2 -12 4))$

☒ $(/ (+ -8 6.2) 3)$ ✓

☒ $(/ (+ 4 6.2 -12) 3)$ ✓

☒ -0.6 ✓

Explanation

$(+ 6.2 -12 4)$, $(+ -8 6.2)$ and -6 all evaluate to -0.6 , so all three produce the correct result.

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