

Unit 13 - Week 11

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Assignment 11

The due date for submitting this assignment has passed. As per our records you have not submitted this assignment.

Due on 2020-12-02, 23:59 IST.

Please note that multiple options may be correct.

1) Which of the following rationals are convergents to $\frac{13331}{1380}$? 1 point

- $\frac{100}{9}$
- $\frac{111}{10}$
- $\frac{711}{61}$
- $\frac{811}{73}$
- $\frac{3655}{329}$
- $\frac{4366}{393}$

No, the answer is incorrect.

Score: 0

Accepted Answers:

- $\frac{9}{711}$
- $\frac{365}{329}$

2) Which of the following rationals are convergents to $\frac{4926}{497}$? 1 point

- $\frac{81}{8}$
- $\frac{91}{9}$
- $\frac{496}{49}$
- $\frac{977}{97}$
- $\frac{2065}{201}$
- $\frac{2561}{253}$

No, the answer is incorrect.

Score: 0

Accepted Answers:

- $\frac{8}{496}$
- $\frac{2065}{201}$

3) Which of the following rationals have $\frac{21}{16}$ and $\frac{151}{113}$ as convergents? 1 point

- $\frac{1061}{808}$
- $\frac{625}{476}$
- $\frac{931}{709}$
- $\frac{927}{709}$
- $\frac{1191}{907}$
- $\frac{1229}{936}$

No, the answer is incorrect.

Score: 0

Accepted Answers:

- $\frac{625}{476}$
- $\frac{931}{709}$
- $\frac{1229}{936}$

4) Which of the following rationals have $\frac{26}{25}$ and $\frac{497}{204}$ as convergents? 1 point

- $\frac{1259}{362}$
- $\frac{1884}{841}$
- $\frac{2963}{1278}$
- $\frac{2798}{1249}$
- $\frac{3665}{1636}$
- $\frac{3712}{1667}$

No, the answer is incorrect.

Score: 0

Accepted Answers:

- $\frac{1884}{841}$
- $\frac{2798}{1249}$
- $\frac{3712}{1667}$

5) Which of the following rationals satisfy $|\frac{113}{70} - \frac{p}{q}| < \frac{1}{q^2}$? 1 point

- $\frac{3}{2}$
- $\frac{5}{4}$
- $\frac{5}{3}$
- $\frac{8}{5}$
- $\frac{8}{7}$
- $\frac{21}{13}$

No, the answer is incorrect.

Score: 0

Accepted Answers:

- $\frac{3}{4}$
- $\frac{5}{3}$
- $\frac{8}{5}$
- $\frac{31}{13}$

6) Which of the following rationals satisfy $|\frac{1171}{127} - \frac{p}{q}| < \frac{1}{q^2}$? 1 point

- $\frac{7}{5}$
- $\frac{8}{5}$
- $\frac{26}{19}$
- $\frac{27}{17}$
- $\frac{127}{93}$
- $\frac{143}{90}$

No, the answer is incorrect.

Score: 0

Accepted Answers:

- $\frac{8}{5}$
- $\frac{27}{17}$
- $\frac{143}{90}$

7) Which of the following rationals satisfy $|\frac{2459}{149} - \frac{p}{q}| < \frac{1}{2q^2}$? 1 point

- $\frac{5}{3}$
- $\frac{7}{4}$
- $\frac{12}{7}$
- $\frac{41}{34}$
- $\frac{135}{76}$
- $\frac{581}{340}$

No, the answer is incorrect.

Score: 0

Accepted Answers:

- $\frac{5}{3}$
- $\frac{12}{7}$
- $\frac{41}{34}$
- $\frac{135}{76}$
- $\frac{581}{340}$

8) Which of the following rationals satisfy $|\frac{1341}{2194} - \frac{p}{q}| < \frac{1}{2q^2}$? 1 point

- $\frac{5}{2}$
- $\frac{17}{7}$
- $\frac{23}{9}$
- $\frac{56}{23}$
- $\frac{241}{99}$
- $\frac{1020}{419}$

No, the answer is incorrect.

Score: 0

Accepted Answers:

- $\frac{5}{2}$
- $\frac{17}{7}$
- $\frac{23}{9}$
- $\frac{241}{99}$
- $\frac{1020}{419}$

9) Assuming that $\pi = 3.1415926$ which of these rationals are convergents to $3 + \pi$? 1 point

- $\frac{49}{8}$
- $\frac{651}{106}$
- $\frac{694}{113}$
- $\frac{1345}{219}$
- $\frac{169293}{27565}$
- $\frac{169987}{27678}$

No, the answer is incorrect.

Score: 0

Accepted Answers:

- $\frac{651}{106}$
- $\frac{113}{694}$
- $\frac{169293}{27565}$
- $\frac{169987}{27678}$

10) Assuming that $e = 2.718281$ which of these rationals are convergents to $2 + e$? 1 point

- $\frac{118}{25}$
- $\frac{154}{39}$
- $\frac{703}{71}$
- $\frac{1859}{384}$
- $\frac{2194}{465}$
- $\frac{85198}{18007}$

No, the answer is incorrect.

Score: 0

Accepted Answers:

- $\frac{184}{25}$
- $\frac{71}{2194}$
- $\frac{85}{18007}$