Number Theory Exercise Part II

- **วิชชาภัทร จินดานาถ** previously submitted answers to this quiz/test on 02-Nov-2023 @ 10:11:54 and obtained **10** correct answers out of **10** .
- This test/quiz can be taken many times.
- Correct answers will NOT be revealed after submission.

Use this statement for Question 1- 8

$let\ x, y\ be\ an\ integer\ such\ that\ 437x + 132y = 7$

$Using\ Euclid\ algo\ to\ solve\ x, y$

1 $Find\ gcd(437, 132)$

1

2

3

4

From previous attempt

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2 $Find\ r_0, r_1, r_2, r_3,$

132,34,8,1

132,41,9,5

437,132,41,8

437,132,41,1

From previous attempt

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3 $Find\ q_0, q_1, q_2$

From previous attempt

3,3,3

3,5,5

3,3,4

5,5,5

---

4 $Find\ P_0, P_1, P_2$

From previous attempt

132,41,8

3,3,5

3,10,43

1,3,16

---

5 $Find\ Q_0, Q_1, Q_2$

From previous attempt

3,7,38

1,3,13

3,3,5

132,41,8

---

6 $Find\ P_3, P_4$

From previous attempt

132,3

43,53

53,10

53,96

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7 *Find* Q_4

From previous attempt

27

29

13

16

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8 *After we solve* x, y *from* $437x + 132y = 7$
we get $x = a + 132t$ *and* $y = b - 437t$
for all integer t *find* a, b

From previous attempt

53,-16

-43,13

203,-672

116,-384

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9 *Find smallest positive integer* x *such* $[2]_{11} \div [7]_{11} = [x]_{11}$

From previous attempt

2

3

5

6

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10 *Let* x *be an integer such that*
$x \equiv 2 \pmod 3$
$x \equiv 4 \pmod 5$
$x \equiv 1 \pmod 7$
Find the smallest positive integer k *such that* $x \equiv k \pmod{105}$

From previous attempt

293

117

239

29

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Previous (?q=onlinecourse/theatre/27086/FGCaF84sZd12s)

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