

CS-2050-All-Sections CS 2050 Homework 6 (HOWARD, FAULKNER, ELLEN)

Vidit Dharmendra Pokharna

TOTAL POINTS

101.5 / 100

QUESTION 1

Question 1 6 pts

1.1 a 3 / 3

! - 0 pts $2^4 \cdot 3^3 \cdot 5^3 \cdot 13^2 \cdot 23^2$

ff - 3 pts Incorrect / No Answer

1.2 b 3 / 3

! - 0 pts $2^7 \cdot 3^2 \cdot 5 \cdot 7$

ff - 3 pts Incorrect / No Answer

QUESTION 2

2 Question 2 4 / 4

! - 0 pts $\frac{8^3}{\ln(8^3)} \approx 82$

ff - 4 pts Incorrect / No Answer

QUESTION 3

3 Question 3 4 / 4

! - 0 pts $(101000001)_2$

ff - 1 pts No subscript indicating base 2

ff - 2 pts Minor error in work

ff - 3 pts Major error in work / no work shown

ff - 4 pts Incorrect / No Answer

QUESTION 4

4 Question 4 4 / 4

! - 0 pts Octal: $(246)_8$

Hex: $(A6)_{16}$

Decimal: $(166)_{10}$

Partly correct

ff - 1 pts Incorrect Octal

ff - 1 pts Incorrect Hex

ff - 1 pts Incorrect Decimal

ff - 1 pts Missed labelling a subscript

ff - 2 pts Minor error in work

ff - 3 pts Major error in work / No work shown

ff - 4 pts Incorrect / No Answer

QUESTION 5

5 Question 5 4 / 4

! - 0 pts $(1100\ 1001\ 1010\ 0110)_2$

ff - 1 pts No subscript indicating base 2

ff - 2 pts Minor error in work

ff - 3 pts Major error in work / No work shown

ff - 4 pts Incorrect / No Answer

QUESTION 6

6 Question 6 3 / 4

ff - 0 pts $(135023)_8$

! - 1 pts No subscript indicating base 8

ff - 2 pts Minor error in work

ff - 3 pts Major error in work / No work shown

ff - 4 pts Incorrect / No Answer

QUESTION 7

Question 7 16 pts

7.1 a 4 / 4

! - 0 pts 5

ff - 4 pts Incorrect / No Answer

7.2 b 4 / 4

! - 0 pts 9

ff - 4 pts Incorrect / No Answer

7.3 c 4 / 4

! - 0 pts 0

ff - 4 pts Incorrect / No Answer

7.4 d 4 / 4

! - 0 pts 3

ff - 4 pts Incorrect / No Answer

QUESTION 8

Question 8 9 pts

8.1 a 3 / 3

! - 0 pts $\$ \$ c = 1 \$ \$$

ff - 3 pts Incorrect / No Answer

8.2 b 3 / 3

! - 0 pts $\$ \$ c = 10 \$ \$$

ff - 3 pts Incorrect / No Answer

8.3 c 3 / 3

! - 0 pts $\$ \$ c = 1 \$ \$$

ff - 3 pts Incorrect / No Answer

QUESTION 9

9 Question 9 8 / 8

! - 0 pts Correct

ff - 1 pts Missing/incorrect introduction (doesn't mention proof type and/or match assumptions made)

ff - 2 pts Does not state assumption(s) in introduction or proof body

ff - 3 pts Invalid assumption (e.g. assumes entire statement is true, assumes conclusion is true in a direct proof, etc.)

Common Errors

ff - 1 pts Missing domain for 1 variable

ff - 2 pts Missing domain for 2+ variables

ff - 2 pts Uses the same variable for different definitions of divisibility (e.g., saying $\$ \$ b = ak \$ \$$ and $\$ \$ c = bk \$ \$$)

Invalid Steps

ff - 2 pts 1 Invalid Step

ff - 4 pts 2 Invalid steps

ff - 6 pts 3+ Invalid Steps

Skipped Steps

ff - 2 pts 1 Skipped Step

ff - 4 pts 2 Skipped Steps

ff - 6 pts 3+ Skipped Steps

Miscited Steps

ff - 1 pts 1 Miscited Steps

ff - 2 pts 2 Miscited Steps

ff - 3 pts 3 Miscited Steps

ff - 4 pts 4+ Miscited Steps

ff - 2 pts Missing or Incorrect Conclusion

Must say that if $a \mid b$ and $b \mid a$ then $b = a$ or $b = -a$
⚡ - 8 pts No Answer

QUESTION 10

10 Question 10 10 / 10

! - 0 pts *Correct*
⚡ - 3 pts Minor math error
⚡ - 6 pts Major Math Error

Missed / Incorrect / Invalid prime
⚡ - 2 pts 1 Missed / Incorrect / Invalid prime
⚡ - 4 pts 2 Missed / Incorrect / Invalid prime
⚡ - 6 pts 3 Missed / Incorrect / Invalid prime
⚡ - 8 pts 4+ Missed / Incorrect / Invalid prime
⚡ - 10 pts No Answer

QUESTION 11

Question 11 6 pts

11.1 a 3 / 3
! - 0 pts 2
⚡ - 3 pts Incorrect / No Answer

11.2 b 3 / 3
! - 0 pts $2^3 \cdot 3^2 \cdot 7$ or 504
⚡ - 3 pts Incorrect / No Answer

QUESTION 12

Question 12 4 pts

12.1 a 2 / 2
! - 0 pts $2^4 \cdot 3 \cdot 7 \cdot 11$ or 3696
⚡ - 2 pts Incorrect / No Answer

12.2 b 2 / 2
! - 0 pts $2^4 \cdot 3^4 \cdot 5^6 \cdot 11^2$ or 31853250000
⚡ - 2 pts Incorrect / No Answer

QUESTION 13

Question 13 4 pts

13.1 a 2 / 2
! - 0 pts *No*
⚡ - 2 pts Incorrect / No Answer

13.2 b 2 / 2
! - 0 pts *Yes*
⚡ - 2 pts Incorrect / No Answer

QUESTION 14

Question 14 8 pts

14.1 a 4 / 4
! - 0 pts $\gcd(123, 456) = 3$
⚡ - 4 pts Incorrect / No Answer

14.2 b 4 / 4
! - 0 pts $\gcd(423, 72) = 9$
⚡ - 4 pts Incorrect / No Answer

QUESTION 15

Question 15 9 pts

15.1 a 3 / 3
! - 0 pts 10
⚡ - 3 pts Incorrect / No Answer

15.2 b 3 / 3

! - 0 pts 22

⌘ - 3 pts Incorrect / No Answer

15.3 C 3 / 3

! - 0 pts 8

⌘ - 3 pts Incorrect / No Answer

QUESTION 16

16 Matching 0 / 0

! - 0 pts Correct

⌘ - 5 pts Incorrect

QUESTION 17

17 On Time 2.5 / 0

! + 2.5 pts On Time (Before Thursday)

⌘ - 0 pts On Time (Friday)

⌘ - 10 pts 1 day late

⌘ - 25 pts 2 days late

1.1 a 3 / 3

! - 0 pts $2^4 \cdot 3^3 \cdot 5^3 \cdot 13^2 \cdot 23^2$

ff - 3 pts Incorrect / No Answer



1.2b 3 / 3

! - 0 pts $2^7 \cdot 3^2 \cdot 5 \cdot 7$

ff - 3 pts Incorrect / No Answer



2 Question 2 4 / 4

! - 0 pts $\frac{8^3}{\ln(8^3)} \approx 82$

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3 Question 3 4 / 4

! - 0 pts $_{10}(101000001)_2$

⌘ - 1 pts No subscript indicating base 2

⌘ - 2 pts Minor error in work

⌘ - 3 pts Major error in work / no work shown

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4 Question 4 4 / 4

! - 0 pts Octal: 246_8

Hex: $A6_{16}$

Decimal: 166_{10}

Partly correct

1 - 1 pts Incorrect Octal

1 - 1 pts Incorrect Hex

1 - 1 pts Incorrect Decimal

1 - 1 pts Missed labelling a subscript

2 - 2 pts Minor error in work

3 - 3 pts Major error in work / No work shown

4 - 4 pts Incorrect / No Answer

5 Question 5 4 / 4

! - 0 pts $_{2}(1100\ 1001\ 1010\ 0110)$

⚑ - 1 pts No subscript indicating base 2

⚑ - 2 pts Minor error in work

⚑ - 3 pts Major error in work / No work shown

⚑ - 4 pts Incorrect / No Answer



6 Question 6 3 / 4

⌘ - 0 pts $\{(135023)_8\}$

! - 1 pts *No subscript indicating base 8*

⌘ - 2 pts Minor error in work

⌘ - 3 pts Major error in work / No work shown

⌘ - 4 pts Incorrect / No Answer

7.1 a 4 / 4

! - 0 pts 5

ff - 4 pts Incorrect / No Answer



7.2b 4 / 4

! - 0 pts 9

ff - 4 pts Incorrect / No Answer



7.3 C 4 / 4

! - 0 pts 0

ff - 4 pts Incorrect / No Answer



7.4 d 4 / 4

! - 0 pts 3

ff - 4 pts Incorrect / No Answer



8.1 a 3 / 3

! - 0 pts $$$c = 1$$$

£ - 3 pts Incorrect / No Answer



8.2b 3 / 3

! - 0 pts $$$c = 10$$$

ff - 3 pts Incorrect / No Answer



8.3 C 3 / 3

! - 0 pts $$$c = 1$$$

ff - 3 pts Incorrect / No Answer



9 Question 9 8 / 8

! - 0 pts *Correct*

ff - 1 pts Missing/incorrect introduction (doesn't mention proof type and/or match assumptions made)

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ff - 2 pts Missing or Incorrect Conclusion

Must say that if $a \mid b$ and $b \mid a$ then $b = a$ or $b = -a$

ff - 8 pts No Answer

10 Question 10 10 / 10

! - 0 pts *Correct*

⌘ - 3 pts Minor math error

⌘ - 6 pts Major Math Error

Missed / Incorrect / Invalid prime

⌘ - 2 pts 1 Missed / Incorrect / Invalid prime

⌘ - 4 pts 2 Missed / Incorrect / Invalid prime

⌘ - 6 pts 3 Missed / Incorrect / Invalid prime

⌘ - 8 pts 4+ Missed / Incorrect / Invalid prime

⌘ - 10 pts No Answer



11.1 a 3 / 3

! - 0 pts 2

ff - 3 pts Incorrect / No Answer



11.2b 3 / 3

! - 0 pts $2^3 \cdot 3^2 \cdot 7$ or 504

ff - 3 pts Incorrect / No Answer



12.1 a 2 / 2

! - 0 pts $2^4 \cdot 3 \cdot 7 \cdot 11$ or 3696

ff - 2 pts Incorrect / No Answer

12.2b 2 / 2

! - 0 pts $2^4 \cdot 3^4 \cdot 5^6 \cdot 11^2 \cdot 13$ or 31853250000

ff - 2 pts Incorrect / No Answer

13.1 a 2 / 2

! - 0 pts No

ff - 2 pts Incorrect / No Answer



13.2b 2 / 2

! - 0 pts Yes

ff - 2 pts Incorrect / No Answer



14.1 a 4 / 4

! - 0 pts $\gcd(123, 456) = 3$

ff - 4 pts Incorrect / No Answer

14.2b 4 / 4

! - 0 pts $\gcd(423, 72) = 9$

ff - 4 pts Incorrect / No Answer

15.1 a 3 / 3

! - 0 pts 10

ff - 3 pts Incorrect / No Answer



15.2b 3 / 3

! - 0 pts 22

ff - 3 pts Incorrect / No Answer



15.3 C 3 / 3

! - 0 pts 8

ff - 3 pts Incorrect / No Answer



16 Matching 0 / 0

! - 0 pts Correct

ff - 5 pts Incorrect



17 On Time 2.5 / 0

! + 2.5 pts *On Time (Before Thursday)*

££ - 0 pts On Time (Friday)

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