

Unit 1

1.1

1. Egyptian
2. Greek
3. Babylonian
4. Mayan
5. Roman
6. African
7. Hindu-Arabic

	Egyptian	Greek	Babylonian	Roman
1204		, ασδ		MCCIV
95		ε		XCV
60		ξ		LX
3833		, γωλγ		MMMDCCCXXXIII
Your age				

8. answers will vary

9. a. Egyptian
 b. Roman or Babylonian
 c. yes

10. some possible answers:

- Base 10 (only 10 symbols)
- Place values .
- Zero place holder
- Unambiguous symbols

Unit 1

1.2

1. forty-one thousand, twenty
2. three thousand, sixty-six and three tenths
3. four million, eight hundred thousand, fifty and twenty-seven thousandths
4. seventy-eight billion, five hundred million, eighty thousand
5. thirty-four hundredths
6. one hundred eighty-five and four ten-thousandths
7. one hundred five million, forty thousand, three hundred and four hundred two thousandths
8. 35,280,055
9. 160,000.72
10. 0.012
11. 37,008,000.024
12. 303,000,085,002
13. 56,082.2
14. 4,000,004.004
15. 901.0402
16. fifty-seven million, nine hundred thousand km.

17. seven hundred sixteen million km.

18. one hundred fifty-two million, one hundred six thousand km.

19. one trillion, five hundred three billion km.

20. one hundred eight million, two hundred thirty thousand km.

1.3

1. $400 + 20 + 5$
2. $8000 + 600 + 70$
3. $50,000 + 7000 + 4 + \frac{8}{10} + \frac{6}{100}$
4. $800,000,000,000 + 90,000,000,000 + 5,000,000 + 60,000$
5. $20,000,000,000 + 3,000,000,000 + 3,000,000 + 40,000 + 700 + \frac{5}{10}$
6. 6,342,000,000
7. 713,004,110.2
8. 12,100,562,000.008

Progress Report

1. Egyptians: base 10
Greek: commas for large #s
Babylonians: base system
Mayans: zero
Romans: subtraction
Africans: patterns
2. a. Roman
b. Greek
c. Hindu-Arabic
d. Babylonian
e. Egyptian

3. Egyptian:

 Babylonian:



Roman:
CDXXV

4. four hundred fifty thousand, sixty-two

5. eight hundred six and three hundredths

6. 80,000,000,000 + 60,000,000 + 2,000 + 40 + 5

7. forty thousand, twenty and twenty-five thousandths

Unit 1

Unit 1 Review

1. Egyptian
2. Babylonian
3. Hindu-Arabic
4. Greek
5. Mayan
6. Roman
7. nine hundred one thousand, forty-five

8. five hundred two million, fifty thousand, five and twenty-five thousandths

9. $7,000,000 + 400,000 + 5,000 + 60$

10. $80,000 + 8$

11. $5,000 + 60 + 2 + \frac{4}{10} + \frac{8}{100}$

12. $120,000,004,002$

13. $16,025,007.42$

14. $12,306.078$

15. $\partial\partial\Gamma\Gamma\ddot{\text{L}}\ddot{\text{L}}999\text{III}$
 $\Gamma\Gamma \qquad \text{III}$

16. CMLXXIV

17. $\begin{matrix} \blacktriangledown & \blacktriangledown & \blacktriangledown & & & \\ \blacktriangledown & \blacktriangledown & \blacktriangledown & & & \end{matrix} \quad \begin{matrix} \triangleleft & \triangleleft & \triangleleft & \blacktriangledown & \blacktriangledown & \blacktriangledown \\ \triangleleft & \triangleleft & \triangleleft & & & \end{matrix}$

18. Progress Report
solutions #1

19. answers will vary

20. answers will vary

Supplemental Exercises
Answers

1.1

1. ♫ ♫ ♫ ♫ | G G G |

2. ♩ || || ||

3. — — — ♪ ♪ ♪ ♪ ♪ || || ||

4. ♪ ♪ || || || ||

5. ♩ ♩ ♩ ♩ ♩ ♩ ♩ ♩ ♩ ♩ ♩ ♩ ♩ ♩ ♩ ♩ ♩ ♩

6. σΥ

7. νθ

8. ζων

9. θρη

10. αα

11. ≈ ≈ ≈

12. Τ ≈ ≈ ≈

13. Τ ≈ Τ

14. ≈ Τ

15. Τ ≈ ≈ ≈

16. XXXVII

17. CDXLIX

18. CMXCIX

19. MXLVI

20. MMCMV

1.2

1. Thirty one thousand, three
2. Eight million, forty-five
3. Fifty-four billion, thirty-eight million, thirty-five
4. Four thousand, one
5. Two billion, one hundred fifty million, four hundred fifty-three thousand, seven
6. Six thousand, thirty-five and one hundredth
7. Sixty-five hundredths
8. One hundred five thousandths
9. Seventy-three million, twenty-nine thousand, one and five thousandths
10. Eight million, thirty thousand, twenty and five hundred eight ten thousandths
11. 708
12. 6,021
13. 13,000,007
14. 525,000,600,039
15. 11,044,009
16. 3,013.5
17. 0.085
18. 8,000,000,057.0099
19. 325,020,000.14
20. 0.015

1.3

1. $900 + 40 + 3$
2. $7,000 + 20 + 1$
3. $30,000,000 + 2,000,000 + 10,000 + 5,000 + 400 + 90 + 9$
4. $1,000,000,000 + 800,000,000 + 70,000,000 + 6,000,000 + 200,000 + 5,000 + 40$
5. $800,000,000,000 + 50,000,000,000 + 3,000,000,000 + 6,000,000 + 30,000 + 3,000 + 5$
6. $\frac{1}{10} + \frac{5}{100}$
7. $9,000 + 70 + 3 + \frac{2}{100}$
8. $10,000,000 + 1,000,000 + 40,000 + 5,000 + 900 + 3 + \frac{7}{10} + \frac{4}{100}$
9. $7,000,000,000 + 1,000,000 + 1,000 + 5 + \frac{4}{100} + \frac{5}{1,000}$
10. $\frac{7}{100} + \frac{8}{10,000}$
11. 609
12. 5,031
13. 40,208
14. 30,207,084
15. 5,309,060,543
16. 0.3701
17. 8,070.003
18. 506,304.017
19. 0.00039
20. 500,090,104,009.203