Zillions of Practice Problems

Decimals and Percents

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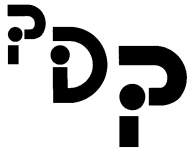

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How This Book Is Organized

Life of Fred: Decimals and Percents has 33 chapters. So does this book.

As you work through each chapter in *Life of Fred: Decimals and Percents* you can do the problems in the corresponding chapter in this book.

Each chapter in this book is divided into two parts.

✯ The first part takes each topic and offers a zillion problems.

✯ The second part is called the Mixed Bag. It consists of a variety of problems from the chapter and review problems from the beginning of the book up to that point.

Please write down your answers before turning to the back of the book to look at my answers. If you just read the questions and then read my answers you will learn very little.

ELIMINATING TEMPTATION

The solutions and answers are all given in the back half of the book. The first question in this book is numbered "108." The second one is "119." In most ordinary practice books, they are numbered, "1, 2, 3 . . ." which is really silly when you think about it. In those books, when you look up the answer to "1" you might accidentally see the answer to "2" and that would spoil all the fun.

If you happen to spot an error that the author, the publisher, and the printer missed, please let us know with an email to: lifeoffred@yahoo.com

As a reward, we'll email back to you a list of all the corrections that readers have reported for this book.

Chapter One
Number Systems

First part: Problems from this chapter

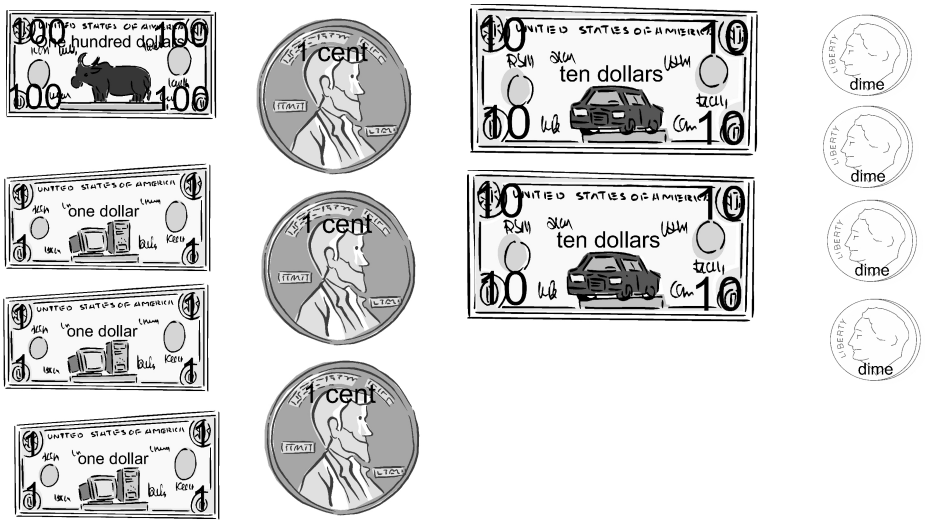
108. Fill in the blanks.
85.79 = ___ tens + ___ ones + ___ tenths + ___ hundredths

119. Fill in the blanks.
602.1 = 6 _____ + 0 _____ + 2 _____ + 1 _____

222. Fill in the blanks.
8174. = 8 thousands + 1 hundred + 7 tens + 4 ones
_____ 10×10 ___ 1

325. Fill in the blanks.
5.238 = 5 ones + 2 tenths + 3 hundredths + 8 thousandths
___ 1/10 _____ _____

480. Joe paid his rent. He paid the landlord

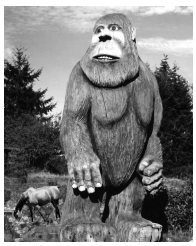


How much was his rent?

Second part: the Mixed Bag: a variety of problems from this chapter and previous chapters

246. π = 3.14159265358979323846264338327 95. . . .
Round off pi to the nearest hundredth.

327. Joe thought that Jelly Bean would be the perfect pet. If Darlene was going to have zillions of cats and zillions of horses, he wanted to have one animal of his own.


Jelly Bean

Darlene had seen ads for cats in her Cutie Cat magazine. She had seen ads for horses in her Hunky Horses magazine. Neither of those magazines had what Joe was looking for.

He headed to the magazine section at King KITTENS mall and looked through the candy magazines. Nothing there. He looked through the fishing magazines. Nothing there. He looked through the male bodybuilding magazines and found the perfect pet.

Joe knew that he would call his pet Jelly Bean because of his big hands. They could hold a lot of jelly beans.

Joe phoned. They told him that the current weight was 1,800 pounds. How many kilograms is that? (one pound ≈ 0.45 kilograms)

440. (continuing the previous problem) How much will it cost Joe to get Jelly Bean shipped to him?

600. We know what the shipping cost is (from the previous problem). On the phone Joe learned that the cost of the He-Man Pet is $8,887. How much is the total that Joe will have to pay including the shipping cost?

678. We know what the total cost of Jelly Bean will be. Joe has 90¢ saved up. (90¢ = $0.90) How much more will he need to save in order to get his pet?

746. Joe currently saves $0 each week. How much would he save in a century?

Chapter Twenty-four
15% More

First part: Problems from this chapter

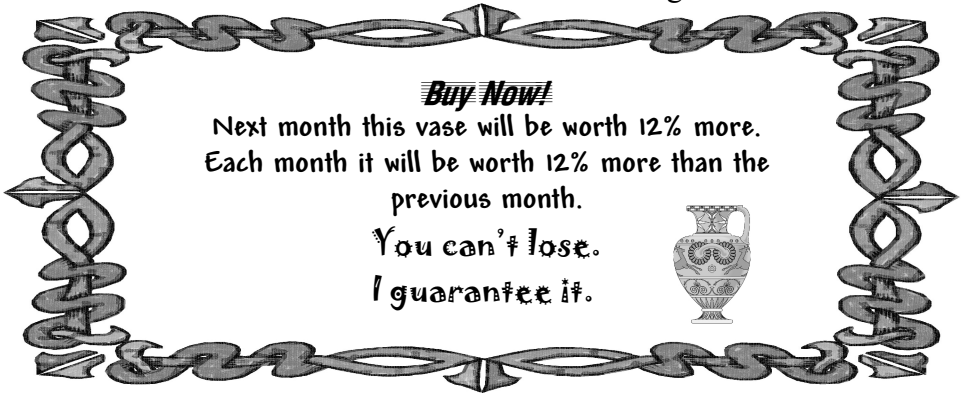
142. Darlene was delighted with the thought of filling her mansion with vases. In her first month of collecting, when she was just starting out, she would buy 400 vases. In the second month she would have learned how to really buy vases and would buy 34% more than she did in the first month. How many vases did she imagine buying in the second month?

216. When Darlene told Joe about her plans to buy a zillion vases for their mansion that they would own after they got married, Joe didn't think about the cost of a mansion or the cost of all those vases. His mind had wandered off to what he was going to have for lunch that day.

The only thing that stuck in his mind was having a zillion vases. He wondered: *What do you do with a zillion vases?*

The answer was obvious. You fill them with jelly beans! Instead of his usual monthly order of 68 cases of jelly beans, he would order 25% more. How many cases would he order?

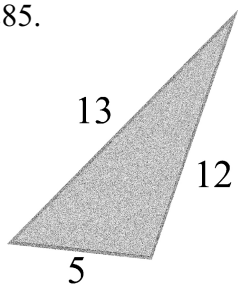
362. C.C. Coalback ran an ad in BRIDAL VASES magazine.



The vase was only $10. Darlene sent in her money in August. How much would it be worth in September? In October?

285–298 Complete Solutions and Answers

285.



When we know the lengths of the sides of a triangle and want to find its area, we use Heron's formula.

perimeter p = 5 + 12 + 13 = 30 meters
semiperimeter s = 30/2 = 15 meters

$A = \sqrt{s(s-a)(s-b)(s-c)}$

$= \sqrt{15(15-5)(15-12)(15-13)}$

$= \sqrt{15(10)(3)(2)}$

$= \sqrt{900}$

To find $\sqrt{900}$ we have to do some trial and error guessing.

Try 20.	$20 \times 20 = 400$	Too small
Try 25.	$25 \times 25 = 625$	Still too small.
Try 40.	$40 \times 40 = 1600$	Too large.
Try 30.	$30 \times 30 = 900$	Yes.

$\sqrt{900}$ = 30 square meters of concrete.

292. Round off 3.14159265358979323846264338327 95. . . to the tenths place.

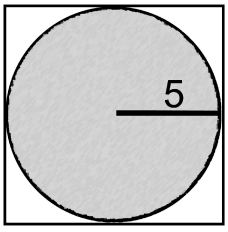
3.14159265358979323846264338327 95. . . ≐ 3.1

294. (continuing problem #199) How far would they be apart if measured in inches. (Use a conversion factor.)

$$\frac{15.7 \text{ feet}}{1} \times \frac{12 \text{ inches}}{1 \text{ foot}} = \frac{15.7 \text{ feet}}{1} \times \frac{12 \text{ inches}}{1 \text{ foot}} = 188.4 \text{ inches}$$

298. She bought a square piece of land that was just big enough to contain that circle of grass. What would be the length of one side of that square?

Some questions are easy.
If the radius is 5, then the diameter is 10. And that is also the length of a side of the square.



Index

adding decimals
#130. 6
#150. 7
#250. 6
#346. 44
#380. 6
#525. 11
#567. 6
#600. 19
#656. 14
#690. 6
#720. 6

area and volume
#139. 57
#141. 61
#172. 63
#200. 64
#231. 73
#268. 63
#285. 61
#307. 61
#348. 63
#393. 47
#405. 68
#442. 74
#446. 47
#484. 49
#569. 63
#590. 52
#641. 71
#688. 68
#838. 50

bar graphs
#168. 36
#344. 36
#425. 44
#588. 36
#615. 55
#798. 62

conversion factors
#126. 35
#137. 52
#234. 33
#236. 57
#274. 44
#301. 73
#310. 35
#327. 19
#399. 35
#406. 21
#429. 64
#440. 19
#448. 62
#473. 42
#511. 80
#542. 68
#549. 31
#577. 24
#630. 45
#643. 26
#649. 62
#658. 47
#714. 56
#810. 16
#930. 39

d = rt distance, rate, time
#158. 56
#214. 70
#223. 34
#278. 34
#395. 56
#475. 56
#530. 66
#557. 56
#579. 29
#677. 56
#806. 45

decimals to fractions
#128. 31
#400. 8
#640. 11
#750. 8
#908. 33

diameter, radius, circumference
#102. 34
#140. 49
#155. 12
#162. 34
#191. 28
#260. 12
#360. 26
#470. 12
#504. 44
#585. 16
#602. 33
#821. 62
#977. 21

dividing decimals
#191. 27
#193. 37
#209. 30
#266. 27
#304. 30
#376. 27
#383. 51
#421. 30
#494. 28
#516. 31

divisibility rules
#100. 28
#276. 25
#337. 55
#356. 25
#367. 66
#408. 25
#444. 31
#519. 25
#738. 25
#854. 35

dollars and cents
#186. 46
#264. 46
#365. 46
#872. 68

elapsed time
#239. 77
#259. 77
#269. 77
#354. 77
#570. 80

fractions to decimals
#121. 30
#184. 32
#256. 32
#341. 32
#398. 11
#478. 66
#538. 55
#591. 32
#647. 32
#740. 33
#754. 66
#844. 33
#870. 52

fractions to percents
#237. 75
#319. 75
#553. 48
#870. 52

functions
#110. 17
#114. 21
#156. 69
#206. 69
#207. 24
#253. 72
#306. 24
#329. 69
#340. 17
#352. 49
#456. 17
#466. 76
#515. 76
#523. 64
#528. 17
#536. 35
#547. 39
#611. 35
#624. 69
#662. 17
#668. 76
#672. 80
#680. 39
#727. 39
#759. 18
#819. 35
#836. 18
#860. 37
#915. 18
#962. 18

Goldbach conjectures
#104. 40
#134. 42
#215. 40
#228. 42
#308. 40
#312. 42
#313. 68
#423. 72

graphing
#273. 78
#358. 72
#595. 72
#668. 76
#694. 72

logic
#607. 66
#620. 30

minutes, hours, inches, feet
#261. 56
#613. 42
#705. 26

multiplying by ten, hundred, etc.
#123. 10
#225. 10
#227. 26
#244. 52
#339. 10
#378. 37
#411. 10
#700. 16

multiplying by zero
#746. 19

multiplying decimals
#180. 15
#270. 21
#390. 15
#436. 15
#521. 37
#533. 15
#785. 15
#944. 15

number systems
#108. 5
#119. 5
#132. 47
#160. 9
#166. 26
#212. 39
#222. 5
#230. 14
#240. 7
#247. 47
#258. 39
#280. 11
#325. 5
#330. 9
#333. 7
#480. 5
#624. 69
#764. 21
#766. 62
#852. 11
#888. 7

ordered pairs
#156. 69
#206. 69
#253. 72
#273. 78
#329. 69
#358. 72
#423. 72
#466. 76
#515. 76
#595. 72

percent problems
#142. 59
#146. 64
#153. 53
#174. 51
#176. 65
#179. 70
#194. 70
#216. 59
#218. 65
#220. 51

#263. 76
#282. 53
#321. 54
#323. 65
#335. 78
#342. 71
#357. 78
#362. 59
#388. 60
#410. 57
#471. 80
#492. 65
#496. 51
#506. 60
#517. 51
#532. 80
#593. 65
#685. 51
#846. 66

percents to decimals or fractions
#210. 48
#404. 48
#461. 75
#606. 50
#965. 76

pi
#102. 34
#199. 28
#246. 19
#292. 16
#360. 26
#585. 16
#602. 33
#977. 21

pie charts
#136. 48
#317. 57
#645. 48
#731. 50
#872. 68

pirme numbers
#107. 38
#205. 38
#302. 38
#419. 38
#502. 38
#761. 55
#813. 55
#896. 55

probability and fractions
#368. 79
#384. 79
#403. 79
#417. 79
#430. 79
#455. 79
#462. 80
#557. 56
#602. 33
#840. 9

ratio
#147. 67
#272. 67
#381. 76
#385. 67
#413. 67

rounding numbers
#246. 19
#292. 16
#334. 21
#336. 14
#402. 26
#454. 39
#490. 24
#531. 47
#532. 80
#538. 55
#581. 13
#591. 32
#663. 37
#677. 56
#685. 51
#701. 31
#711. 45
sets
#144. 60
#164. 23
#167. 68
#241. 66
#254. 23
#337. 55
#350. 23
#356. 25
#367. 66
#386. 31
#452. 33
#458. 55
#463. 23
#500. 33
#513. 23
#540. 26
#609. 23
#673. 23
#709. 37
#858. 39
squares and circles
#298. 49
#590. 52
subtracting decimals
#117. 8
#170. 11
#178. 66
#242. 8
#316. 78
#416. 37
#508. 9
#586. 42
#665. 52
#678. 19
#697. 9
#777. 11
#815. 29
#830. 8
#900. 8
subtracting mixed units
#125. 24
#238. 20
#300. 20
#450. 20
#544. 20
#651. 20
#670. 24
#800. 31
#890. 21