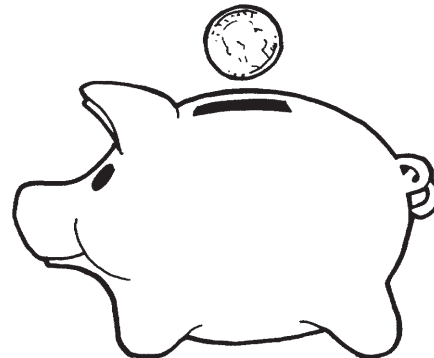# Piggy Bank Math 22

Facts and Reminders

Coin Combinations

Bertha Biggspender broke open her piggy bank.
She had a total of seven coins worth $0.19.
Which coins did she have?

To solve problems of this type, you need to know three things:

- the number of coins
- the total amount of money
- any kinds of coins not included

Pennies First

Always do the pennies first in these problems. To have $0.19, Bertha had to have at least 4 pennies because pennies are the only coins which could be used for the last four cents. This leaves $0.15 to be accounted for and three remaining coins. The only coins which will work for this combination of money are three nickels.

Make a Chart

Record the information on a chart like this:

Number of Coins	Amount of Money
4 pennies	$0.04
3 nickels	$0.15
Totals: 7 coins	$0.19

Challenging Problems

Bertha Biggspender found her wallet which had seven coins worth $0.91.
She did not have any dimes or half dollars. Which coins did she have?

Do the pennies first—she had to have at least one penny. There were not enough coins to have more than one penny. She has six coins which equal $0.90. She had no dimes and no half dollars so the combination must include only quarters and nickels. A total of three quarters and three nickels will work.

Number of Coins	Amount of Money
1 penny	$0.01
3 quarters	$0.75
3 nickels	$0.15
Totals: 7 coins	$0.91

Reminders

- Make a chart.
- Do pennies first.
- Do not forget half dollars.
- Match exact number of coins.
- Match exact amount of money.

Piggy Bank Math

Coin Combinations Less Than a Dollar

Sample

Maggie Moneytoes broke her piggy bank open and found five coins worth $0.37. Which coins did she have?

She had to have two pennies. The only combination of three coins worth $0.35 is one quarter and 2 nickels.

Directions: Carefully study the Facts and Reminders page for this unit. Make a chart to solve each of these problems. Use another piece of paper, if necessary.

1. Festus Flattbroke found five coins worth $0.57 in his shirt pocket. Which coins did he find?

Number of Coins	Amount of Money
2 pennies	$0.02
_____	_____
Totals: 5 coins	$0.57

2. Johnny Cashless found 17 coins worth $0.21 under the couch. Which coins did he find?

Number of Coins	Amount of Money
_____	_____
Totals: 17 coins	$0.21

3. Mister Monnebaggs cracked his piggy bank and found six coins worth $0.96. He did not have a half dollar. What coins did he find? _____

4. Mrs. Monnebaggs opened her piggy bank and found five coins worth $0.22. What coins did she find? _____

5. Bertha Biggspender found seven coins worth $0.39 in her pencil box. Which coins did she find? _____

6. You opened your piggy bank and found five coins worth $0.78. Which coins did you find?

_____

Piggy Bank Math

Coin Combinations More Than a Dollar

Festus Flattbroke found nine coins worth $1.23 under his bed. None of the coins was a half dollar. Which coins did he find?

Facts

- At least three of the coins must be pennies.
- There were no half dollars so the dollar can be four quarters.
- The remaining $0.20 must be two dimes.

Number of Coins	Amount of Money
3 pennies	$0.03
4 quarters	$1.00
2 dimes	$0.20
Totals: 9 coins	$1.23

Directions: Carefully study the Facts and Reminders page for this unit. Make a chart to solve each of these problems. Use another piece of paper, if necessary.

1. Sondra Sorich opened her piggy bank so she could go to the mall. She found 11 coins worth $2.11. What coins did she have?

2. Bertha Biggspender found 13 coins worth $3.03 in her makeup bag. She did not have any dimes. Which coins did she find?

3. Maggie Moneytoes found 20 coins worth $3.27 in her shoe. She did not have any nickels. Which coins did she find?

4. Johnny Cashless kept his money in a dirty sock. He had 19 coins worth $4.51. He did not have a half dollar. Which coins did he have?

5. Mister Monnebaggs had 14 coins worth $3.97 in his office safe. He did not have any dimes. Which coins did he have?

6. Mrs. Monnebaggs found 19 coins worth $4.14 in her hat. She did not have any nickels. Which coins did she have?

7. You found 27 coins worth $1.17 in an old magazine. There were no nickels. Which coins did you find?

8. Your best friend found 37 coins worth $7.30 in an old coin purse. There were no half dollars and only one dime. Which coins did your friend find?

Answer Key

Page 88
1. 31
2. January, March, May, July, August, October, December
3. February, April, June, September, November
4. 5
5. 4
6. 5
7. Mondays, Tuesdays, Wednesdays
8. 3
9. 19th, Friday
10. 25th, Thursday
11. 14th, Wednesday
12. 5th, Monday

Page 89
1. April, June, September, November
2. 28th, Friday
3. 20
4. 10
5. Monday the 3rd
6. Friday the 28th
7. April
8. 10th, Wednesday
9. Thursday
10. 23rd, Tuesday
11. Answer will vary.
12. No, because February never has 30 days.

Page 90
1. February
2. No, they are not leap years and not evenly divisible by 400.
3. March, 21st
4. January, 4th
5. March, 25th
6. 60th
7. 306
8. 2 or 3
9. 15 or 16
10. 2400, It is the only century evenly divisible by 400.

Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.
			1	2	3	4

Page 92
1. 2 pennies, 1 nickel, 2 quarters
2. 16 pennies, 1 nickel
3. 1 penny, 2 dimes, 3 quarters
4. 2 pennies, 2 nickels, 1 dime
5. 4 pennies, 2 nickels, 1 quarter
6. 3 pennies, 1 quarter, 1 half dollar

Page 93
1. 1 penny, 2 nickels, 8 quarters or 1 penny, 1 half dollar, 5 quarters, 3 dimes, 1 nickel
2. 3 pennies, 8 quarters, 2 half dollars
3. 2 pennies, 10 dimes, 7 quarters, 1 half dollar
4. 1 penny, 18 quarters
5. 2 pennies, 4 nickels, 1 quarter, 7 half dollars
6. 4 pennies, 1 dime, 2 half dollars, 12 quarters
7. 10 dimes, 17 pennies
8. 28 quarters, 1 dime, 3 nickels, 5 pennies

Page 94
1. 20 quarters, 2 pennies, 1 nickel, 3 dimes
2. 39 dimes, 11 nickels, 4 pennies
3. 80 quarters, 15 dimes, 1 nickel
4. 4 half dollars, 9 pennies, 15 dimes, 80 quarters
5. 1 dime, 34 quarters, 8 nickels
6. 3 nickels, 1 half dollar, 160 quarters, 80 dimes
7. 72 quarters, 26 dimes, 1 nickel, 1 penny
8. 3 pennies, 20 dimes, 10 nickels, 5 quarters

Page 96
1. congruent
2. similar
3. congruent
4. congruent
5. similar
6. congruent
7. similar
8. neither
9. congruent
10. neither

Page 100
1. 6
2. 16
3. 10
4. 48
5. 54.4
6. 10.5
7. 62
8. 14
9. 194
10. 15.4
11. 49
12. 35.1
13. 15.84
14. 73.6
15. 19
16. 22.68
17. 153
18. 141.12
19. 30.15
20. 450
21. 351

Page 101
1. 100
2. 60
3. 72
4. 300
5. 105.6
6. 25
7. 95
8. 120
9. 270
10. 240
11. 39
12. 135
13. 400
14. 180
15. 16
16. 250
17. 91
18. 126
19. 59.69
20. 195.98
21. 1519

Page 102
1. 12
2. 24
3. 40
4. 21
5. 31.5
6. 50.4
7. 43.5
8. 122.4
9. 18.8
10. 9.9
11. 18.2
12. 33.6
13. 40
14. 77
15. 1.75

Page 104
1. least smart (Curly), smartest (Slick)
2. least smart (Buster), smartest (You)
3. fewest teeth (Elmer), most teeth (Buster) Elmer (1 tooth), Beetle (2 teeth), Nick (3 teeth), Dipsy (4 teeth), Daisy (5 teeth), Curly (6 teeth), Buster (7 teeth)

Page 105
1. weighs the least (Curly), weighs the most (Daisy) Curly (100 pounds), Rocket (160 pounds), Buster (200 pounds), Molly (280 pounds), Daisy (380 pounds)
2. shortest (Dipsy), tallest (Nosey) Dipsy (120 cm), Elmer (125 cm), Lanky (133 cm), Molly (139 cm), Buster (148 cm), Hairy (158 cm), Nosey (168 cm)
3. Lanky, Buster, Hairy, Elmer, Dipsy, Nosey, Dandy

Page 106
1. Rocket $50, Daisy $100, Dipsy $200, Fussy $400
2. youngest (Molly), oldest (Curly) Molly (5), Buster (6), Beetle (8), Nick (9), Doc (10), Mickey (11), Rocket (12), Curly (14)
3. eats the least (Curly), eats the most (Mickey) Curly (1.25), Beetle (2.5), Elmer (10), Dipsy (40), Molly (80), Daisy (320), Buster (640), Mickey (1280)