THE CLAPP-YOUNG ARITHMETIC TEST—Forms A and B

Concrete Problems

For Grades 5–8

By Frank L. Clapp, University of Wisconsin, and Robert V. Young, University of Pittsburgh

DIRECTIONS

A. For Giving the Tests

1. Do not distribute the tests until you have followed these directions down to No. 6.

2. Put the following sample problem on the board, omitting the x in the square preceding "$21."

    Sample problem. A woman bought three pairs of shoes. One pair cost $5 and the other two pairs cost $8 each. How much did all three pairs cost?

    ☐ $24
    ☐ $15
    ☒ $21
    ☐ $13

3. Read the sample problem to the pupils and then solve it in the rectangle immediately underneath the problem and to the left of the squares. When you have the correct answer, explain to the pupils that you make a mark "x" in the square that comes before "$21" to show that you think this is the correct answer. Place the mark in the square. Then explain to the pupils that four answers are given with each problem and that one of the four is correct, while the others are wrong. They are to solve each problem in the rectangle just below it, and when they find an answer that they think is the correct one, they are to make a mark "x" in the square that comes before it, just as you have done.

4. Make each of the following clear to the pupils:

    a. Problems are to be solved in the rectangles below them.

    b. The pupil is to solve his problem, and if he gets an answer that is the same as one given he is to mark in the square that comes before this answer. If he can not get an answer that is the same as one of those given, he is not to mark in any square. In any case he is to mark in only one square.

    c. If a pupil finds that he has marked in a wrong square and wants to change his mark he should not try to erase it, but should simply draw a circle around it and mark in the square that he thinks is the right one. He should bear firmly on his pencil when he makes the mark.

    d. Pupils should not hurry, but should work carefully and without wasting any time.

    e. They should not puzzle too long over any one problem. If one proves to be too difficult they should omit it and go on.

    f. The test folders are sealed and pupils are not to open them. When they finish the first page they are to turn the entire folder over without opening it.

5. See that each pupil is supplied with a well-sharpened pencil. It will be better for each pupil to have two pencils, since he may break the lead in one.

6. Distribute the test folders, asking the pupils to fill out the blanks on the first page, and then to wait for the signal to begin work.

7. When all the pupils are ready, say, "Begin."

8. At the end of thirty-five minutes, say, "Stop." Collect the papers at once.

B. For Getting the Pupils' Scores

1. The test folders are easily opened by running a pencil between the leaves. (Teachers may save time by having pupils do this before the papers are collected.)

2. A problem has been solved correctly if the pupil's mark falls within the corresponding square on page 1a or 2a; the answer is wrong if the mark falls above or below this square, as follows:

$$\boxed{\times} = \text{correct}$$

$$\times = \text{incorrect}$$

3. To find a pupil's score, count the marks that appear within squares on pages 1a and 2a. This number multiplied by 4 is the score.

C. For Diagnosis

The right answers appear on pages 1a and 2a with a square following each one and with a statement indicating how the problem should be solved coming immediately after this square. The wrong answers appear here also, but without any squares. Following each wrong answer is a statement indicating how the answer was, in all probability, obtained. As the pupil marks in a square on page 1 or page 2 his mark is reproduced on one of the inside pages and appears either within a square, indicating that he has solved the problem correctly, or without any square and between the answer that he has marked and the statement indicating how such answer was obtained. In this way a teacher can easily discover the common errors that her pupils make without laboriously analyzing their work. Pupils may examine their own papers, see which problems they missed, see how they solved them, and see, also, how the problem should have been solved.

Standard Scores

The Grade Standards given below are to be interpreted as follows: — A pupil who is finishing the work of Grade V should make a score of 44; one who is finishing the work of Grade VI should make a score of 60, etc. The Age Standards indicate that a pupil who is 11 years old should make a score of 44; one who is 11 years and 3 months old should make a score of 48, etc.

Grade Standards

Grade	Score
5B	32
5A	44
6B	52
6A	60
7B	64
7A	72
8B	76
8A	80

Age Standards

Years	Months	Score
11	0	44
11	3	48
11	6	52
11	9	56
12	0	60
12	4	64
12	8	68
13	0	72
13	6	76
14	0	80

Validity, Reliability, and Standardization

The twenty-five problems represent the following phases of arithmetic: — Addition, Subtraction, Division, Mixed Fundamental Processes (3 types), United States Money, Fractions (4 types), Time Measure (2 types), Linear Measure (2 types), Liquid Measure, Square Measure, Decimals (5 types), Percentage (4 types).

The problems were selected from a list of seventy that were approved by a large number of elementary principals and superintendents as being problems that every elementary school pupil should be taught to solve. The seventy problems were given to about 3000 pupils, and the twenty-five selected were among those showing medium per cents of error and an increase in difficulty from lower to higher grades. The wrong answers selected were from the work of these pupils.

The Probable Error of the Test is 2.45 and the Coefficient of Reliability is .79. Those who are acquainted with this phase of educational statistics will realize that these figures indicate a dependable test.

Edited by Frank L. Clapp, Professor of Education, University of Wisconsin

THE CLAPP-YOUNG ARITHMETIC TEST — Form A
Concrete Problems

By Frank L. Clapp, University of Wisconsin, and Robert V. Young, University of Pittsburgh

Left margin labels: Score | Grade | Pupil's name | Birthday comes on | Date of test | Age last birthday | Teacher | School

1. On a boat there were 319 men, 257 women, and 42 children. How many people were there on the boat altogether?

- [ ] 996
- [ ] 628
- [ ] 618
- [ ] 534

2. Mr. Jackson had 154 sheep. He sold 75 and later bought 230. How many sheep had he then?

- [ ] 459
- [ ] 384
- [ ] 305
- [ ] 309

3. A man had $5000. He paid $1425 for a car. How much money had he left?

- [ ] $3575
- [ ] $3475
- [ ] $35.75
- [ ] $4425

4. Counting 32 lb. of oats to the bushel, how many bushels are there in 256 lb. of oats?

- [ ] 288 bu.
- [ ] 224 bu.
- [ ] 8192 bu.
- [ ] 8 bu.

5. A train that is due at our station at 8:10 was 30 min. late. What time was it when the train came?

- [ ] 7:80
- [ ] 7:40
- [ ] 8:40
- [ ] 780

6. James raised 43 rabbits. He sold 26. How much were the rabbits he had left worth at 23 cents each?

- [ ] 92
- [ ] $3.91
- [ ] $.92
- [ ] 391

7. George bought 96 papers and sold ¾ of them. How many papers did he sell?

- [ ] 24
- [ ] 128
- [ ] 72
- [ ] 32

8. A boy had two $5-bills, three $2-bills, four $1-bills, 3 half-dollars, and 2 quarters. How much money did he have in all?

- [ ] $13
- [ ] $22.50
- [ ] $12
- [ ] $22

9. A man works 2¾ hours repairing a car. If he is paid 80 cents per hour, how much does he receive for the job?

- [ ] $1.60
- [ ] $2.20
- [ ] $1.80
- [ ] $1.60¾

10. George can hoe 7¾ rows of corn in one hour. Andrew can hoe 6⅔ rows. How many rows can both hoe in one hour?

- [ ] 13 5/12
- [ ] 14 5/12
- [ ] 13 17/12
- [ ] 51 2/3

11. If 3 tons of coal cost $30, what will 10 tons cost?

- [ ] $300
- [ ] $100
- [ ] $900
- [ ] $90

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To find the score, count the squares that are marked out and multiply this number by 4.

6.

92	$43 + 26 + 23$
$3.91 ☐	$43 - 26, \times 23$
$.92	$43c + 26c + 23c$
391	Omitted decimal point and $

7.

24	Found number left
128	$96 \times 4/3$
72 ☐	$\frac{3}{4}$ of 96, or $\frac{3}{4} \times 96$
32	$96 \div 3$

8.

$13	Added all figures: 5, 2, 1, 3, 2
$22.50	Counted 2 quarters as $1
$12	Added 5, 2, 3, and 2
$22 ☐	$10 + $6 + $4 + $1.50 + $.50

9.

$1.60	Multiplied 80c by 2, but not by $\frac{3}{4}$
$2.20 ☐	$80c \times 2\frac{3}{4}$
$1.80	$80c \times 2\frac{1}{4}$
$1.60¾	$80c \times 2$. "¾" simply "tacked on" to answer

10.

13 5/12	Did not carry the "1" from 17/12
14 5/12 ☐	$7\frac{3}{4} + 6\,2/3$
13 17/12	Did not change 17/12 to 1 5/12
51 2/3	Multiplied instead of adding

11.

$300	Used $30 as cost of 1 ton
$100 ☐	$30 \div 3 \times 10$
$900	Used $30 as cost of 1 ton and found cost of 30 tons
$90	Used $30 as cost of 1 ton and found cost of 3 tons

1.

996	Arranged numbers like this, 319 257 42
628	Mistake in adding second column
618 ☐	$319 + 257 + 42$
534	$319 + 257 - 42$

2.

459	$154 + 75 + 230$
384	$154 + 230$
305	$230 + 75$
309 ☐	$154 - 75 + 230$ or $154 + 230 - 75$

3.

$3575 ☐	$5000 - 1425$
$3475	Mistake in third combination
$35.75	Inserted decimal point
$4425	Mistake in last combination

4.

288 bu.	256 bu. $+$ 32 bu.
224 bu.	256 bu. $-$ 32 bu.
8192 bu.	256 bu. $\times$ 8
8 bu. ☐	256 bu. $\div$ 32

5.

7:80	Subtracted instead of adding and borrowed 1 instead of 60
7:40	Subtracted instead of adding
8:40 ☐	$8:10 + 30$
780	Subtracted, using hours and minutes as one number

19.

24.25 mi.	Forgot having borrowed in third combination.
22.25 mi.	Mistake in third combination
23.25 mi. ☐	50.00 − 26.75
26.25 mi.	Subtracted 50 from 26.76

20.

.01	Mistake in locating decimal point
.001 ☐	.025 × .04
.1	Mistake in locating decimal point
1.	Mistake in locating decimal point

21.

56.	Did not use ".392" as decimal
5.6	Mistake in locating decimal point
.56	Mistake in locating decimal point
.056 ☐	Three decimal places in quotient

22.

$13.50	Found amount to be saved
$15.00	Mistake in locating decimal point
$14.85	Mistake in locating decimal point, and subtracted from $15
$1.50 ☐	$15 × .10

23.

70%	Found the per cent left
33 1/3%	Divided 456 by 135 and located decimal point wrong
30% ☐	135.00 ÷ 450
3/10	Found fractional part 135 is of 450

24.

40%	Divided 48 by 12
80% ☐	Found what per cent 48 is of 60 (48.00 ÷ 60)
4%	Divided 48 by 12 and called answer per cent
25%	Found what per cent 12 is of 48 (12.00 ÷ 48)

25.

$100,000	Multiplied $12,500 by 8
$1000	Found 8 per cent of $12,500, but did not subtract from $12,500
$1562.50	Divided $12,500 by 8
$11,500 ☐	$12,500 × .08 = $1000 $12,500 − $1000 = $11,500

12.

5/12 yd. ☐	7 1/6 − 6¾
13 11/12 yd.	Added instead of subtracting
3/12 yd.	Did not call the borrowed "1" twelfths
1 11/12 yd.	Forgot having borrowed from 7

13.

454,008 ☐	
4548	Simply wrote figures given
45,408	⎫ Does not know decimal character
454,000,008	⎭ of number system

14.

39 gal.	Added all the figures
14 gal.	Thought 2 qt. made a gallon
7 gal. ☐	2 gal. + 1¼ gal. + 2¼ gal. + 1½ gal.
9¾ gal.	Added all the figures, getting 39, and divided by 4

15.

5 hr. 15 min. ☐	2 hr. 5 min. + 3 hr. 10 min.
6 hr. 15 min.	Got 3 hr. 5 min. between 9:15 and 11:20, or 4 hr. 10 min. between 1:30 and 4:40
5 hr. 25 min.	Got 2 hr. 15. min. between 9:15 and 11:20
5 hr. 5 min.	Got only 3 hr. between 1:30 and 4:40

16.

26.6 A.	Thought 120 sq. rd. made an acre
20 A. ☐	40 × 80 ÷ 160
10 A.	Thought 320 sq. rd. made an acre
5 A.	Thought 640 sq. rd. made an acre

17.

20,649	Regarded decimals as integers
140.358	Regarded .62 as integer
78.978 ☐	Decimal points in column
77.978	Mistake in adding fourth column

18.

3 yd. 1 ft. ☐	5 yd. − 1 yd. 2 ft.
3 yd. 10 ft.	Thought 12 ft. made a yd.
4 yd. 1 ft.	Forgot having borrowed 1 yd.
1 yd. 1 ft.	Borrowed "3" from the 5 yd.

12. From a roll of ribbon containing 7⅙ yd., 6¾ yd. were sold. How many yards were left in the roll?

- [ ] 5/12 yd.
- [ ] 13 11/12 yd.
- [ ] 3/12 yd.
- [ ] 1 11/12 yd.

13. Write in figures: Four hundred fifty-four thousand eight.

- [ ] 454,008
- [ ] 4548
- [ ] 45,408
- [ ] 454,000,008

14. A boy delivered the following bottles of milk: Monday, 8 one-quart bottles, 10 one-pint bottles; Tuesday, 9 one-quart bottles, 12 one-pint bottles. How many gallons of milk did he deliver in all?

- [ ] 39 gal.
- [ ] 14 gal.
- [ ] 7 gal.
- [ ] 9¾ gal.

15. In the morning, John left home at 9:15 and returned at 11:20. In the afternoon, he left at 1:30 and returned at 4:40. How long was he away from home altogether?

- [ ] 5 hr. 15 min.
- [ ] 6 hr. 15 min.
- [ ] 5 hr. 25 min.
- [ ] 5 hr. 5 min.

16. A field is 40 rd. wide and 80 rd. long. How many acres does it contain?

- [ ] 26.6 acres
- [ ] 20 acres
- [ ] 10 acres
- [ ] 5 acres

17. Add 28.62, 32.9, and 17.458.

- [ ] 20,649
- [ ] 140.358
- [ ] 78.978
- [ ] 77.978

18. The members of a class got 5 yd. of ribbon from a store. They returned 1 yd. 2 ft. For how much ribbon did they have to pay?

- [ ] 3 yd. 1 ft.
- [ ] 3 yd. 10 ft.
- [ ] 4 yd. 1 ft.
- [ ] 1 yd. 1 ft.

19. After a boy had hiked 26.75 miles of a 50-mile journey, how far did he still have to go?

- [ ] 24.25 mi.
- [ ] 22.25 mi.
- [ ] 23.25 mi.
- [ ] 26.25 mi.

20. Multiply .025 by .04.

- [ ] .01
- [ ] .001
- [ ] .1
- [ ] 1.

21. Divide .392 by 7.

- [ ] 56.
- [ ] 5.6
- [ ] .56
- [ ] .056

22. Ralph wishes to buy a baseball outfit which costs $15. He has saved 10% of this amount. How much money has he saved?

- [ ] $13.50
- [ ] $15.00
- [ ] $14.85
- [ ] $1.50

23. Mrs. Brady had 450 chickens and sold 135. What per cent of her chickens did she sell?

- [ ] 70%
- [ ] 33 1/3%
- [ ] 30%
- [ ] 3/10

24. A baseball team has won 48 games and lost 12. What per cent of its games has it won?

- [ ] 40%
- [ ] 80%
- [ ] 4%
- [ ] 25%

25. A man bought a house and lot for $12,500. He sold the property at a loss of 8%. For how much did he sell it?

- [ ] $100,000
- [ ] $1000
- [ ] $1562.50
- [ ] $11,500

THE CLAPP-YOUNG SELF-MARKING TESTS

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Edited by Frank L. Clapp, Professor of Education, University of Wisconsin

THE CLAPP-YOUNG ARITHMETIC TEST — Form B

Concrete Problems — For Grades 5-8

By Frank L. Clapp, University of Wisconsin, and Robert V. Young, University of Pittsburgh

Pupil's name — **Birthday comes on** — **Date of test** — **Age last birthday** — **Teacher** — **School** — **Score** — **Grade**

1. At a football game there were 269 women, 227 men, and 32 children. How many people were there at the game altogether?

- [ ] 816
- [ ] 528
- [ ] 464
- [ ] 518

2. John had 134 marbles. He lost 45 and later bought 120. How many marbles did he then have?

- [ ] 209
- [ ] 299
- [ ] 254
- [ ] 165

3. A man had $7000. He spent $3325 for an aeroplane. How much money had he left?

- [ ] $4675
- [ ] $36.75
- [ ] $3375
- [ ] $3675

4. Counting 16 ounces to a pound of candy, how many pounds are there in 384 ounces of candy?

- [ ] 400 lb.
- [ ] 368 lb.
- [ ] 1536 lb.
- [ ] 24 lb.

5. Lindbergh was due at 7:10, but was delayed for 40 minutes. When did he land?

- [ ] 6:30
- [ ] 6:70
- [ ] 7:50
- [ ] 670

6. Jane had 54 toys. She sold 38 of them. How much are the remaining toys worth at 65 cents each?

- [ ] 157
- [ ] $10.40
- [ ] $1.57
- [ ] 1040

7. Betty had 72 beads. She lost $\frac{2}{3}$ of them. How many did she lose?

- [ ] 24
- [ ] 108
- [ ] 48
- [ ] 36

8. Bob deposited in the school bank three $5-bills, two $2-bills, six $1-bills, 2 half-dollars, and 3 quarters. How much did he deposit altogether?

- [ ] $26.75
- [ ] $16
- [ ] $27.25
- [ ] $13

9. A man rented a rowboat for $2\frac{3}{4}$ hours at 60 cents per hour. What was the total charge for the use of the boat?

- [ ] $1.35
- [ ] $1.20
- [ ] $1.65
- [ ] $1.20\frac{3}{4}$

10. A boy scout hiked $4\frac{1}{3}$ miles on Monday and $3\frac{3}{4}$ miles on Tuesday. How far did he travel altogether?

- [ ] 7 1/12
- [ ] 7 13/12
- [ ] 8 1/12
- [ ] 16¼

11. If 4 bicycles cost $40, what will 10 bicycles cost?

- [ ] $400
- [ ] $100
- [ ] $1600
- [ ] $160

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To find the score, count the squares that are marked out and multiply this number by 4.

6

157	$54 + 38 + 65$
$10.40 ☐	$54 - 38, \times 65$
$1.57	$54¢ + 38¢ + 65¢$
1040	Omitted decimal point and $

7

24	Found number left
108	$72 \times \frac{3}{2}$
48 ☐	$\frac{2}{3}$ of 72, or $\frac{2}{3} \times 72$
36	$72 \div 2$

8

$26.75 ☐	$15 + $4 + $6 + $1 + $.75
$16	Added three, two, six, 2 and 3
$27.25	Counted 3 quarters as $1.25
$13	Added 5, 2, 1, 2, and 3

9

$1.35	Multiplied 60 by 2, and then by $\frac{1}{4}$
$1.20	Multiplied 60 by 2, but not by $\frac{3}{4}$
$1.65 ☐	$60 \times 2\frac{3}{4}$
1.20\frac{3}{4}$	60×2; simply "tacked on" the $\frac{3}{4}$

10.

7 1/12	Did not carry the "1" from 13/12
7 13/12	Did not change 13/12 to 1 1/12
8 1/12 ☐	$4\frac{1}{3} + 3\frac{3}{4}$
16¼	Multiplied instead of adding

11.

$400	Used $40 as cost of 1 bicycle
$100 ☐	$40 \div 4, \times 10$
$1600	Used $40 as cost of 1 bicycle, and found cost of 40 bicycles
$160	Used $40 as cost of 1 bicycle, and found cost of 4 bicycles

1.

816	Arranged numbers like this $\begin{matrix}269\\227\\32\end{matrix}$
528 ☐	$269 + 227 + 32$
464	$269 + 227 - 32$
518	Mistake in adding second column

2

209 ☐	$134 - 45 + 120$; or $134 + 120 - 45$
299	$134 + 45 + 120$
254	$134 + 120$
165	$120 + 45$

3

$4675	Mistake in last combination
$36.75	Inserted decimal point
$3375	Subtracted 0's from subtrahend
$3675 ☐	$7000 - 3325$

4

400 lb.	$384 + 16$
368 lb.	$384 - 16$
1536 lb.	384×4
24 lb. ☐	$384 \div 16$

5

6:30	Subtracted instead of adding
6:70	Subtracted instead of adding and borrowed 1 instead of 60
7:50 ☐	$7:10 + 40$
670	Subtracted, using hours and minutes as one number

19.

48.50 mi.	Subtracted 75 from 49.25
26.75 mi.	Forgot having borrowed from the "5"
35.75 mi.	Mistake in fourth combination
25.75 mi. ☐	75.00 − 49.25

20.

.003 ☐	.075 × .04
.03	⎫
.3	⎬ Mistake in locating decimal point
3.	⎭

21.

46	Did not use ".414" as a decimal
4.6	⎫ Mistake in locating decimal point
.46	⎭
.046 ☐	Three decimal places in quotient

22.

$10.80	Found amount Tom lacked
$11.88	Got 12¢ and subtracted from $12.00
$1.20 ☐	$12 × .10
$12.00	Mistake in locating decimal point

23.

75%	Found the per cent left
40%	Divided 660 by 165 and added a "0"
25% ☐	165.00 ÷ 660
¼	Found what fractional part 165 is of 660

24.

30%	Divided 45 by 15 and added a "0"
75% ☐	Found what per cent 45 is of 60 (45.00 ÷ 60)
3%	Divided 45 by 15
33⅓%	Found what per cent 15 is of 45 (15.00 ÷ 45)

25.

$72,500	Multiplied $14,500 by 5
$13,775 ☐	$14,500 × .05 = $725; $14,500 − 725 = $13,775
$2,900	Divided $14,500 by 5
$725	Found 5% of $14,500, but did not subtract

12.

1 7/12 qt.	Did not call the borrowed "1" twelfths
15¼ qt.	Added instead of subtracting
2¾ qt.	Forgot having borrowed from the 8
1¾ qt. ☐	8½ − 6¾

13.

532,005 ☐	
5325	Simply wrote digits given
53,205	Wrote first three digits and last digit with "0" inserted to make enough places for thousands
532,000,005	Wrote 532,000 as one number, then added the last "order" with "5" in unit's place

14.

7¾ gal. ☐	Added in any one of several ways
9¾ gal.	Added all the figures, getting 39, then divided by 4
39 gal.	Added all the figures
15½ gal.	Thought 2 qt. made a gallon

15.

5 hr. 45 min.	Got 1 hr. too many in one of the periods —often by counting as follows, 9, 10, 12
4 hr. 45 min. ☐	2 hr. 25 min. + 2 hr. 20 min.
4 hr. 55 min.	Got 2 hr. 35 min. for first period
4 hr. 25 min.	Neglected the minutes in the second period

16.

5A ☐	40 × 20, ÷ 160
6⅔ A	Thought 120 sq. rd. made an acre
2½ A	Thought 320 sq. rd. made an acre
1¼ A	Thought 640 sq. rd. made an acre

17.

170.058	Regarded the .92 as an integer
41124	Regarded decimals as integers
78.978 ☐	Decimal points in column
77.978	Mistake in adding fourth column

18.

4 yd. 2 ft. ☐	7 yd. − 2 yd. 1 ft.
5 yd. 2 ft.	Forgot having borrowed 1 yd.
2 yd. 2 ft.	Borrowed "3" from 7 yd.
4 yd. 11 ft.	Thought 12 ft. made a yd.

12. Some girls bought 8½ quarts of ice cream. They used 6¾ quarts. How much was left?

- ☐ 1 7/12 qt.
- ☐ 15¼ qt.
- ☐ 2¾ qt.
- ☐ 1¾ qt.

13. Write in figures: Five hundred thirty-two thousand five.

- ☐ 532,005
- ☐ 5325
- ☐ 53,205
- ☐ 532,000,005

14. A boy sells 7 one-quart bottles and 9 one-pint bottles of orangeade at one show, and 16 one-quart bottles and 7 one-pint bottles at another. How many gallons did he sell in all?

- ☐ 7¾ gal.
- ☐ 9¾ gal.
- ☐ 39 gal.
- ☐ 15½ gal.

15. School begins in the morning at 9:15 and dismisses at 11:40. In the afternoon school begins at 1:05 and dismisses at 3:25. How long do we stay in school?

- ☐ 5 hr. 45 min.
- ☐ 4 hr. 45 min.
- ☐ 4 hr. 55 min.
- ☐ 4 hr. 25 min.

16. Our athletic field is 40 rods long and 20 rods wide. How many acres does it contain?

- ☐ 5 acres
- ☐ 6⅔ acres
- ☐ 2½ acres
- ☐ 1¼ acres

17. Add 22.92, 38.658 and 17.4.

- ☐ 170.058
- ☐ 41124
- ☐ 78.978
- ☐ 77.978

18. The teacher bought 7 yd. of material for Mary's costume. She returned 2 yd. and 1 ft. How much did she use?

- ☐ 4 yd. 2 ft.
- ☐ 5 yd. 2 ft.
- ☐ 2 yd. 2 ft.
- ☐ 4 yd. 11 ft.

19. In an automobile race of 75 miles a car broke down at 49.25 miles. How far had it yet to go?

- ☐ 48.50 mi.
- ☐ 26.75 mi.
- ☐ 35.75 mi.
- ☐ 25.75 mi.

20. Multiply .075 by .04

- ☐ .003
- ☐ .03
- ☐ .3
- ☐ 3.

21. Divide .414 by 9

- ☐ 46
- ☐ 4.6
- ☐ .46
- ☐ .046

22. Tom wants to buy a pair of skates which costs $12.00. He has saved 10% of the amount. How much has he saved?

- ☐ $10.80
- ☐ $11.88
- ☐ $1.20
- ☐ $12.00

23. Of 660 students in a school, 165 entered a field meet. What per cent entered the field meet?

- ☐ 75%
- ☐ 40%
- ☐ 25%
- ☐ ¼

24. The Pirates won 45 games and lost 15. What per cent did they win?

- ☐ 30%
- ☐ 75%
- ☐ 3%
- ☐ 33⅓%

25. A man bought a race track for $14,500. He sold it at a loss of 5%. What was the selling price?

- ☐ $72,500
- ☐ $13,775
- ☐ $2,900
- ☐ $725