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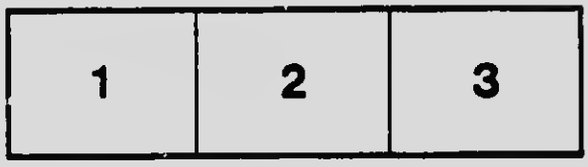

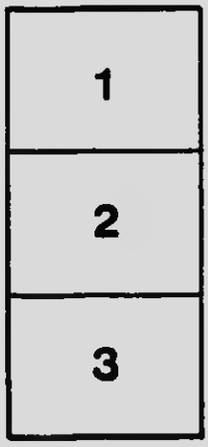

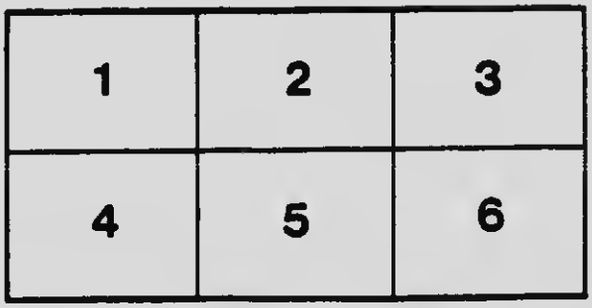

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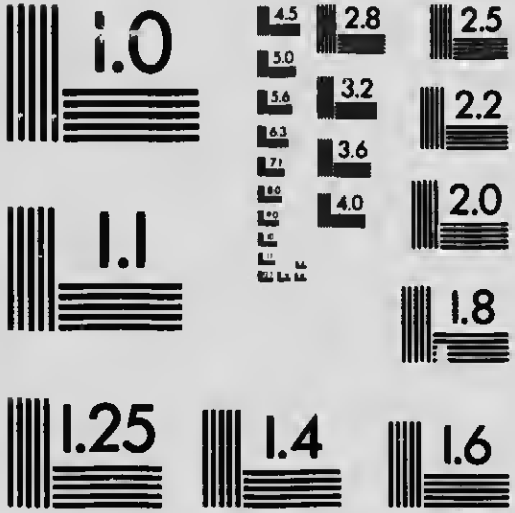

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ENTERED according to Act of Parliament of Canada, in the year Nineteen hundred and seven, by H. J. SILVER, in the office of the Minister of Agriculture.

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MENTAL VII.—1.

[illegible] What decimal? What [illegible]

Ans. .....

[illegible] 4 mos.?

Ans. .....

[illegible] an a 70 dys. note for $50 disco[illegible]

Ans. .....

[illegible] allows 5% [illegible] what is the cash [illegible] an account [illegible]?

Ans. .....

5. F[illegible] on $220 due 2 yrs. hence at 5%?

Ans. .....

6. Compo[illegible] on $20 at 10% for 2 yrs.?

Ans. .....

7. Give Prime Factors of 144.

Ans. .....

8. Difference between $1\frac{1}{4}$ and $\frac{8}{49}$?

Ans. .....

9. $3\frac{1}{3}$ loaves of bread cost $0.40, what is the cost of 15 loaves?

Ans. .....

10. A [illegible] bought 10 doz. eggs—$\frac{1}{8}$ were bad—what % [illegible] The number bad is what % of the number good?

Ans. .....

MENTAL VII.—2.

1. A barrel contains 200 lbs. of sugar. If a grocer sells 13 lbs. each day, what % of the sugar is sold in a week?

   Ans.....

2. Give Prime Factors of 250.

   Ans.....

3. From $13\frac{1}{17}$ take $12\frac{1}{3}$.

   Ans.....

4. Compound int. on $40 at 5% for 2 yrs.?

   Ans.....

5. True discount on $318 in a yr. hence at 6%?

   Ans.....

6. An 80 dys. note for $100 is discounted 10 dys. after date at 10%. What is the bank discount?

   Ans.....

7. A tradesman allows a discount of 12%, what is the cash payment on $10?

   Ans.....

8. Interest on $150 at 4% for 7 yrs.?

   Ans.....

9. 5 men cut 20 cords of wood in 4 dys. How many men will be required to cut half the wood in half the time?

   Ans.....

10. If goods are sold at $1\frac{1}{8}$ times the cost, what is the gain %?

    Ans.....

MENTAL VII.—3.

1. A bed costing $80 was sold for $64, what was the loss %?

Ans.....

2. 21 yds. of cloth cost £2. 2s. What is the cost in £ of 100 yds.?

Ans.....

3. What is the amount of $15 at 5% for 2 yrs.?

Ans.....

4. The list price of a book is $4.80. A trade discount of 12½% is allowed and a further discount of 10% for cash. What is the cash price?

Ans.....

5. If a note for $200 is dated Sept. 15 and is due in 70 dys., when will it mature? If discounted at date, what will be the bank discount at 7½%?

Ans.....

6. True discount on $530 in 1 yr. hence at 6%?

Ans.....

7. Compound int. on $500 at 10% for 1 yr. payable half-yearly?

Ans.....

8. Simplify $\frac{16\frac{1}{3}}{4\frac{1}{12}}$

Ans.....

9. Give H. C. F. of 48 and 72.

Ans.....

10. What is the difference between 5% of 20 and 20% of 5?

Ans.....

MENTAL VII.—4.

1. Give L. C. M. of 8, 9, and 4.

Ans.....

2. Divide $2\frac{1}{3}$ by $6\frac{1}{2}$.

Ans.....

3. Amount at comp. int. of \$20 at 5% for 2 years?

Ans.....

4. Of a flock of 90 sheep, 10% die of disease, 20% are sold. How many remain?

Ans.....

5. True discount on \$318, $1\frac{1}{2}$ yrs. hence at 4%?

Ans.....

6. What is the net amount of a bill of groceries amounting to \$25 with 10% off for cash?

Ans.....

7. A note dated June 3, due in 25 days. When will it mature?

Ans.....

8. What is the selling price of goods which cost \$40 if gain is 20%?

Ans.....

9. What is the amount of \$60 at $2\frac{1}{2}$% for 3 yrs.?

Ans.....

10. If I lend a friend \$35 for 70 dys., how long should he lend me \$700?

Ans.....

MENTAL VII.—5.

1. A man walks 25 miles in 7 hrs. How far will he walk in 35 hrs.?

Ans.....

2. What is the rate of interest when $300 gives $25 in 2 years?

Ans.....

3. If a carpet for a room costs $12.00 at 60c. a yard., what % of the money is wasted by turning in 5 yds.?

Ans.....

4. Give Prime Factors of 123.

Ans.....

5. A dealer sold 200 lbs. sugar at 5c. a lb. What should be deducted from the amount of the bill if 5% discount is allowed for cash?

Ans.....

6. The cost of 12 lbs. butter is $3.00. At what must the butter be retailed to gain 10%?

Ans.....

7. What is the present worth of $309 due 1 yr. hence at 3%?

Ans.....

8. A note dated May 3, at 2 mos. is discounted on May 27. How many days has it to run?

Ans.....

9. Amount at compound interest of $40 at 5% for 1 yr., payable half-yearly?

Ans.....

10. Find the value of $\frac{\frac{1}{3}+\frac{1}{6}}{\frac{1}{3}-\frac{1}{6}} =$

Ans.....

MENTAL VII.—6.

1. A man had $\$10\frac{3}{8}$. He lost $\$1\frac{1}{8}$, $\$1\frac{1}{4}$, $\$1\frac{3}{8}$. How much had he left?

   Ans.....

2. What is the bank discount on a 70 dys. note for $600, discounted at date, at 5%?

   Ans.....

3. Give Prime Factors of 400?

   Ans.....

4. What % of a regiment survive if $\frac{1}{3}$ die of fever and $\frac{1}{2}$ die of their wounds?

   Ans.....

5. What is the present worth of $412 due 1 yr. hence at 3%?

   Ans.....

6. List price $3.00. Discount 7%. Selling price?

   Ans.....

7. Amount at compound interest of $100 at 5% for 2 yrs.?

   Ans.....

8. Interest on $800 for 4 yrs. is $80. Find rate?

   Ans.....

9. What is 10% of £50. 10s. 5d.?

   Ans.....

10. If I buy a dog for $40 and sell it for $15, what % do I lose?

    Ans.....

MENTAL VII.—7.

1. If a pane of glass costs 14c., and I am charged $14\frac{2}{7}\%$ of the cost for putting it in, how much would 10 such panes cost when put in?

Ans.....

2. Interest on \$60 at 6% for 6 yrs.?

Ans.....

3. Compound interest on \$300 at 3% for 2 yrs.?

Ans.....

4. Give H. C. F. of 27, 45, and 54.

Ans.....

5. A tradesman allowed 5% for cash on a bill of \$1500. What was the amount of discount?

Ans.....

6. What is the present worth of \$630 due 1 yr. hence at 5%?

Ans.....

7. 15 yds. of print sell for \$1.50. If that was 150% of the cost, how much money did the merchant gain?

Ans.....

8. When does a note dated Nov. 28 and due in 24 dys. mature?

Ans.....

9. $\frac{1}{2}$ of $\frac{3}{5} \div \frac{9}{30}$.

Ans.....

10. If the rent of a house is advanced from \$16 to \$20 a month, what is the landlord's gain %?

Ans.....

MENTAL VII.—8.

1. Find the value of $\frac{\frac{1}{3} \text{ dy.} + 13 \text{ hrs.}}{1 \text{ hr.} + 360 \text{ min.}}$

Ans.....

2. 400 is 400% of what number?

Ans.....

3. What will the bank discount be on a note for $380 due in 70 dys. at 5%?

Ans.....

4. What is the true discount of $624 due 1 yr. hence at 4%?

Ans.....

5. If $10 is deducted from a bill of $250 for cash, what is the rate of discount?

Ans.....

6. Give L. C. M. of 3, 11, and 12.

Ans.....

7. Find the compound interest on $600 at 5% for 1 yr., payable half-yearly?

Ans.....

8. What principal will amount to $212 at 2% in 3 yrs.?

Ans.....

9. If a can holds 2 gals. of oil and 1 pt. leaks out, what % of the oil remains?

Ans.....

10. What principal will amount to $110 in 5 yrs. at 2%?

Ans.....

MENTAL VII.—9.

1. How many metres in 20 Hm.? in 4.8 Km.? in 7430 mm.?

Ans.....; .....; .....

2. $16\frac{2}{3}\%$ of a flock of sheep is black. The flock numbers 48. How many white?

Ans.....

3. What is the present worth and true discount of \$208 due $\frac{1}{2}$ yr. hence at 8%?

Ans.....; .....

4. Change to Hm., 48.6 Km.; 7000 dm.; 476 m.

Ans.....; .....; .....

5. $\frac{3+5}{8-2}=$, $\frac{14-9}{7+6}=$, $\frac{3\times 8}{3+8}=$, $\frac{8\div 4}{9-7}=$

Ans....., ..., ..., ...

6. How many cm. in $\frac{1}{2}$ m.? $\frac{3}{4}$ dm.? 10 mm.?

Ans.....; .....; .....

7. I had \$60 on returning home after losing $33\frac{1}{3}\%$ and giving away 25% of it. How much had I at first?

Ans.....

8. How many dm. in a Km.? a Dm.? a Hm.?

Ans.....; .....; .....

9. What principal will amount to \$360 in 5 yrs. at 4%?

Ans.....

10. Write as metres, 88 Hm., 9 m., 5 dm.; 4 m., 36 cm., 1 m.

.....; .....; .....; .....; .....

MENTAL VII.—10.

1. How many metres of cloth in .8 Hm., 9 Dm., and 30 m.?

Ans.....

2. How many mm. make a metre? a dm.? a Dm.?

Ans.....;.....;.....

3. If $20 is deducted from a bill of $400, what is the rate of discount?

Ans.....

4. What time will it take $400 to earn $48 at 6%?

Ans.....

5. Give Prime Factors of 225.

Ans.....

6. What is $11\frac{1}{100}$ minus $1\frac{11}{100}$?

Ans.....

7. Change to dm., $\frac{1}{2}$ Km; .4 Hm.; 3 Dm.

Ans.....;.....;.....

8. Find the value of 20 m. 5 dm. of silk at 10 francs a metre.

Ans.....

9. A train goes 60 Km. an hour, how many miles a minute is that?

Ans.....

10. What is the difference between $\frac{1}{8}$% of $16 and 8% of $16?

Ans.....

1. Change to litres, 9 Hl.; 4 Dl.; 500 ml.

Ans.....;.....;.....

2. How many inches in 1 m.....; 1 dm.....; 1 cm.....; 2 m.....?

3. How many sq. dm. in 1 sq. m.? in 1 sq. Dm.? in 1 sq. Hm?

Ans.....;.....;.....

4. If $120 is deducted from the price of a piano valued at $600, what is the rate of discount?

Ans.....

5. Change to Hm., 46 Mm.; 89 Dm.; 2200 m.

Ans.....;.....;.....

6. What is the present worth and true discount of $345 due 3 yrs. hence at 5%?

Ans.....

7. Give H. C. F. of 81 and 144.

Ans.....

8. $3\frac{1}{3}$ books cost $\$51\frac{1}{9}$. How much for each book

Ans.....

9. What time will it take $650 to earn $65 at 2%?

Ans.....

10. Change to metres, 48 dm.; 94 Dm.; .4 Km.; .03 Mm.

Ans.....; .....; .....; .....

MENTAL VII.—12.

1. What is the value of 140 dm. of cloth at 5c. a metre?

Ans.....

2. What time will it take $1 to gain $1 at 8%?

Ans.....

3. $\frac{15 \times \frac{1}{3}}{\frac{1}{45} \times \frac{3}{20}} =$

Ans.....

4. Change to sq. m., 486 sq. dm.; 92,000 sq. cm.; 2.4 sq. Dm.

Ans.....; .....; .....

5. Give L. C. M. of 6, 8, and 10.

Ans.....

6. A bookseller allows 10% for cash. What will be the net amount of a bill for 4 books at 50c.?

Ans.....

7. Change to Hl., 18.6 Kl.; 129,000 ml.; 897 Dl.

Ans.....; .....; .....

8. How many sq. yds. in 10 sq. m.....; 5 sq. m. .....; 100 ca.....?

9. It cost $12 to lay 1.196 sq. yds. of road. How much will a road 10 m. wide and 120 m. long cost?

Ans.....

10. Find the difference in longitude between 72° E. and 54° E.

Ans.....

MENTAL VII.—13.

1. 9 equal pieces of wood are sold from a board 180 cm. long; what is the length in dm. of each piece?

Ans.....

2. Change to m., 8000 mm.; .008 Km.; .0009 Hm.

Ans.....

3. On a bill of $200 a man allows 7% discount instead of 5%. What was the amount of his mistake?

Ans.....

4. Find the total number of litres in 8 Kl., 9 Hl., 4 Dl., 2 l.; in 900 dl., 400 cl.

Ans.....; .....

5. If tea costs a grocer 24c., for what must he retail it to gain 25%?

Ans.....

6. Write 16 sq. m., 8 sq. dm., 24 sq. cm., having the sq. m. as the unit.

Ans.....

7. Give Prime Factors of 312.

Ans.....

8. Which is greater and by how much $\frac{3\frac{1}{2}}{\frac{1}{4}}$ or $\frac{10}{3\frac{1}{3}}$?

Ans.....

9. Write 83 sq. m., 9 sq. dm., and 4 sq. cm., having the sq. m. as the unit.

Ans.....

10. How many ca. in 1 sq. m.; 4 sq. dm.; 900 sq. dm.; 3 sq. Hm.?

Ans.....; .....; .....; .....

MENTAL VII.—14.

1. How many Ha. in 890 a.? in 72,300 ca.? in 2 a.? and 4 ca.?

Ans.....; .....; .....; .....

2. From 100 take $\frac{5\frac{2}{3} \div \frac{1}{3}}{6 \div \frac{1}{2}}$

Ans.....

3. It takes 1.5 metres of cloth to make a blouse, how many blouses from 15 Dm.?

Ans.....

4. Change to Ha, 1 sq. Hm.; 1482 sq. m.; 14 sq. Km.

Ans.....;.....; .....

5. Write as cu. m., 8 cu. Dm.; 928 cu. Dm.; 18,000 cu. cm.

Ans.....; .....; .....

6. Fnd the total number of litres in 40 dl., 30 cl., 20 ml.; in 89 l., 110 dl., 400 cl.

Ans.....; .....

7. From a bill of $400 a man deducted $15. What was the % of dis.?

Ans.....

8. Find the difference in longitude between 97° W. and 115° W.

Ans.....

9. Find the interest on $2,000 in 5 yrs. at 4%.

Ans.....

10. Write as cu. dm., 8.9 cu. m.; 400 cu. cm.; .0000034 cu. Dm.

Ans.....; .....; .....

MENTAL VII.—15.

1. How many grams in 1 Kg., 8 Hg., and 4.8 dg. ?

Ans.....; .....; .....

2. Change to a., 100 sq. m.; 4 sq. Hm.; 42 sq. Dm.

Ans.....;.....;.....

3. Change 1 Hl. to litres; to cu. dm.; to cu. m.; to steres.

Ans.....; .....; .....; .....

4. How many steres in 1 cu. m.; 4 cu. m.; 8.8 cu. Dm.; 8000 cu. dm.

Ans.....; .....; .....; .....

5. How many metres of ribbon at 18c. a metre can be purchased for $3.60 ?

Ans.....

6. How many cu. yds. in 1 cu. m.....; 4 steres.....; 100 steres..... ?

7. If 17.6 pts. of milk cost 80c., what will a Hl. cost?

Ans.....

8. What is it that weighs a Kg.; a g.; a M. Ton?

Ans.....;.....;.....

9. How many ca. in a field 100 m. long by 342 m. wide? Ares? Ha.?

Ans.....;.....;.....

10. How much do 9 l. of water weigh; 8 Dl.; 7.9 Hl.; 10 dl.?

Ans.....; .....; .....; .....

MENTAL VII.—16.

1. Change 4.8 steres to cu. m.; cu. dm.; litres; Metric tons.

   Ans.....; .....; .....; .....

2. How many metres of ribbon at 2c. a dm. can be purchased for $4?

   Ans.....

3. What part of a cubic yard is 100 cu. dm.?

   Ans.....

4. How many Kg. in 1 ton? how many grams?

   Ans.....,.....,.....

5. How many sq. m. in a lot 1 Hm. long by 5 Dm. wide? How many ca.?

   Ans.....; .....

6. Find the value of 1 dl. of milk a day for the month of November at 7c. a litre.

   Ans.....

7. How many litres in 1 cu. dm.; 832 cu. dm.; .49 cu. m.?

   Ans.....;.....;.....

8. If the school yard is 40 m. long and 20 m. wide, how many times will a boy have to walk around it to go 1.2 Km?

   Ans.....

9. Change 1 metric ton of water into lbs.....; into pts.....

10. A measure contains 1 Kg. of water; how many dl. does it hold? how many cu. cm.?

    Ans.....; .....

MENTAL VII.—51.

1. Change to sq. m., 8 sq. Dm.; .073 sq. Hm.; 4200 sq. cm.

Ans.....; .....; .....

2. If I walk 3 Km. an hour, how long will it take me to walk 9000 m.?

Ans.....

3. A barrel of water weighs 2 metric tons, how many Kg.? Hl.?

Ans.....; .....

4. 4 panes of glass at 15c. less 5% for cash. Cash price?

Ans.....

5. Give L. C. M. of 7, 9, and 81.

Ans.....

6. Value of $\frac{1}{2}\frac{9}{1} \div \frac{1}{4}$ of $1\frac{1}{7}$.

Ans.....

7. Change 9000 l. to cu. dm.; to cu. m.

Ans.....; .....

8. Change 49 Hl. to cu. dm.; to cu. m.

Ans.....; .....

9. A pile of wood is 20 m. long, 4 m. wide, and .3 m. high. How many steres of wood?

Ans.....

10. Interest on $12 for 6 yrs. at 3%?

Ans.....

MENTAL VII.—52.

1. What is the cost of 8.42 Hl. of grain at 2c. a litre?

Ans.....

2. If 1 litre weighs 8 Kg., what will 10 cu. dm. weigh?

Ans.....

3. How many litres in 4.4092 lbs. of water? in 5.28 pts. of milk?

Ans.....; .....

4. $480 is 120% of what sum?

Ans.....

5. What is the amount of $500 for 5 yrs. at $5\frac{1}{5}\%$?

Ans.....

6. A brick is 2 dm. long, 4 m. wide, and .5 dm. thick. What does it weigh if 1 cu. cm. weighs 2 g.?

Ans.....

7. A box contains 10,000 litres; how deep is it if it is 2 m. long and $2\frac{1}{2}$ m. wide?

Ans.....

8. Give H. C. F. of 36 and 144.

Ans.....

9. What is the weight in Kg. of $\frac{1}{2}$ cu. m. of a metal that weighs 7 times as much as water?

Ans.....

10. The cost of 8 tons of coal at $1\frac{1}{2}$c. a Kg.?

Ans.....

MENTAL VII.—53.

1. Change to ares, 1 Ha.; 8.9 sq. Hm.; 382 sq. m.

Ans.....; .....; .....

2. How many lots each containing 4 ares can be made out of a farm containing 4.4 Ha.?

Ans.....

3. A farmer put 1200 Kg. of grain into 24 bags. How many Kg. in each bag?

Ans.....

4. 4 yds. of cashmere at $1.50 less 5% for cash. Cash price?

Ans.....

5. Find the difference in longitude between 41° E. and 94° W.

Ans.....

6. Write as cu. m., 8 cu. m., 49 cu. dm.; 85 cu. Dm. 23 cu. m.

Ans.....; .....

7. Change 239 cu. m. to l.; to Hl.; to Kl.

Ans.....; .....; .....

8. What is the amount of $10 for 3 yrs. at 3%?

Ans.....

9. In 2 cu. cm. of water how many grains Troy? how many grains in 10 cu. cm.?

Ans.....; .....

10. Change to cu. m., 96.4 Hl; 800 Dl.; 5000 l.

Ans..... ;.....; .....

MENTAL VII.—54.

1. Write as litres, 4 Hl., 5 Dl.; 240 dl., 1 cl.

Ans.....; .....

2. State the area of the parallelograms whose base is 2 yds. and height $1\frac{1}{2}$ ft.

Ans.....

3. Find the area of a triangle whose base is $3\frac{1}{2}$ ft. and perpendicular height 4 ft.

Ans.....

4. How many cu. m. in a tank 2 Dm. long, 4 m. wide, and 2 m. deep?

Ans.....

5. Spent $66\frac{2}{3}\%$ of salary, gave away 50% of remainder, and banked balance, which was $300. What was my salary?

Ans.....

6. Give Prime Factors of 180.

Ans.....

7. Change 4967 Hg. of water to Hl.

Ans.....

8. How many Ha. in a lot 4 Hm. long by 3 Hm. wide?

Ans.....

9. Write as sq. m., 9 sq. m., 4 sq. dm., 7 sq. cm.; 5 sq. Dm., 5 sq. Hm., 5 sq. m.

Ans.....; .....

10. Write as metres, 9 Km., 4 Hm., 3 Dm., 1 m.; 1 m., 2 dm., 3 cm., 4m.

Ans.....; .....

MENTAL VII.—55.

1. Divide the sum of $10\frac{1}{5}$ and $2\frac{1}{2}$ by their difference.

Ans.....

2. A cistern holds 6 cu. m., it is 2 m. long and 2 m. wide. How deep is it?

Ans.....

3. What is the circumference of a circle whose radius is 49 ft.?

Ans.....

4. Find the area of a triangle. Base 8 ft., p. h. 4.125 ft.

Ans.....

5. The distance from home to school is 400 m. How many Km. will a boy walk going to and from on the 5 school days in a week?

Ans.....

6. What is the weight of water in 1 litre; in 4 l.; in 5 dl.?

Ans.....; .....; .....

7. 10 hockey sticks at 25c. less 5% for cash. Cash price?

Ans.....

8. Find the area of the cross section of a water pipe that is 2 in. in diameter?

Ans.....

9. How many Ha. in a field 200 m. long by 400 m. wide?

Ans.....

10. An iron bar weighing 12 Kg., 5 Hg., is made into 5 bars worth 4c. a Kg. What is each bar worth?

Ans.....

MENTAL VII.—56.

1. If a boy has 17 examples in arithmetic correct out of 20, what % is incorrect?

   Ans.....

2. 2.2046 lbs. of sugar cost 9c. How much is that per metric ton?

   Ans.....

3. How deep is a cistern which holds 9000 l. and whose base is a square 3 m. square?

   Ans.....

4. What is the circumference of a circle whose diameter is 140 in.?

   Ans.....

5. Find the base of a triangle. Area 83 sq. ft., p. h. 10.375 ft.

   Ans.....

6. In the "Star" Harrier Race Longboat ran 24 Km. How many steps did he make if the steps were each 15 dm. long?

   Ans.....

7. How many cl. in 1 Kg.; in 9 Kg.; in 528 Dg.?

   Ans.....; .....; .....

8. What is the difference between 10% and 7% on a bill of $200?

   Ans.....

9. How many sq. ft. in the base of a water tank that is 7 ft. in diameter?

   Ans.....

10. What is the cost of a rug 4 m. by 3 m. at .4 francs a sq. dm.?

    Ans.....

MENTAL VII.—57.

1. If a horse eats 5 Kg. of oats a day, how long will he be eating 1000 g.?

Ans.....

2. $(\frac{1}{2} - \frac{2}{5}) \div (\frac{1}{2} \times \frac{1}{2}) =$ .....

3. When does a note dated Jan. 15, time 60 dys., mature?

Ans.....

4. Give L. C. M. of 12, 8, and 36.

Ans.....

5. Find area of triangle, base 10 ft., p. h. $8\frac{1}{3}$ ft.

Ans.....

6. Find area of rhombus $5\frac{1}{2}$ yds. long and 10 ft. high.

Ans.....

7. A street railway car is 8 m. long, 1.5 m. wide, and .5 m. deep, how many tons of broken stone does it carry if stone is 6 times as heavy as water?

Ans.....

8. What time will a sum of money double itself at 5%?

Ans.....

9. A field contains 1.5 Ha.; how many lots 50 m. by 10 m. can be sold out of it?

Ans.....

10. A horse tethered by a rope 21 ft. long can graze over how many sq. ft. of ground?

Ans.....

MENTAL VII.—58.

1. How long is the equator on a globe 21 inches in diameter?

Ans.....

2. How long is a walk whose area is 24 sq. Dm. and width 8 m.?

Ans.....

3. Find net amount of a bill of $7,000 less 10%.

Ans.....

4. A ship contains 40,000 steres of grain whose weight is ¼ that of water, how many metric tons does it weigh?

Ans.....

5. Express in aeres the area of a rhomboid 32 rods long and 20 rods perpendieular height.

Ans.....

6. A barrel of water weighs 4897 g., how many litres of water are there in it?

Ans.....

7. What is the eireumferenee of a cirele whose diameter is .14 in.?

Ans.....

8. Find area of triangle, base 3 ft., p. h. 6 inches.

Ans.....

9. From Boston to Chieago is 2000 Km. How many steps 1 m. long will be required to eover the distance?

Ans.....

0. Give H. C. F. of 75 and 105.

Ans.....

MENTAL VII.—59.

1. 1 dm. a second, how many metres an hour?

Ans.....

2. Find area of triangle, base 18 ft., p. h. 1 rod.

Ans.....

3. How many cu. m. of air for each pupil of a class of 30 in a room 10 m. long, 8 m. wide, 6 m. high? (b) how many cu. dm.?

Ans.....; (b).....

4. If it cost $20 to build 39.371 inches of railroad, how much will a Km. cost?

Ans.....

5. Sold apples to gain 7%. My profit was $3.50. What did they cost?

Ans.....

6. What is the circumference of a circle whose radius is 3.5 in.?

Ans.....

7. A vase full of water weighs 4.7 Kg., the vase itself weighs 5 Hg., what is its full capacity in litres?

Ans.....

8. Find the area of a diamond-shaped pane whose side is 4 in. and perpendicular height $6\frac{3}{4}$ in.?

Ans.....

9. A druggist makes 500 pills weighing 1.2 g. each, how many Kg. of material does he use?

Ans.....

10. What is the dis. on $3,000 at 12%?

Ans.....

MENTAL VII.—60.

1. At 9c. a sq. m. what will it cost to paint a floor 8 Dm. long by 1.2 Dm. wide?

   Ans.....

2. What is the dis. on $20 at 8%?

   Ans.....

3. How many diamond-shaped panes will be required for a window whose height is 5 ft. and width 3 ft.? (Side of pane 4 in., p. h. $6\frac{3}{4}$ in.)

   Ans.....

4. Oil is worth 8c. for 5 dl. what will 2 Hl. cost?

   Ans.....

5. What is the circumference of a rod whose diameter as measured by the calipers is 2.1 in.?

   Ans.....

6. 5 metric tons of water can be pumped in a hour. How many lbs. is that in 2 hours?

   Ans.....

7. A tank is 4 m. long, 2 m. wide, and 5 m. deep, how many litres does it contain?

   Ans.....

8. Find area of a triangular field whose base is 60 yds. and p. h. 25 yds.

   Ans.....

9. Give L. C. M. of 9, 10, and 11.

   Ans.....

10. What is the int. on $40 at 3% for 4 mos.?

    Ans.....

MENTAL VII.—61.

1. $35\frac{1}{14} + (\frac{3}{7} - \frac{1}{7}) + \frac{3}{14} =$ .....
2. How many cu. dm. in a vessel which holds 75 Kl.? How many dl.?

   Ans.....; .....
3. A ship sails 3000 Km. in 5 days. How many metres per day?

   Ans.....
4. Find number of sods required to cover a triangular plot, base 10 yds., p. h. $4\frac{1}{2}$ ft., each sod being a sq. ft.

   Ans.....
5. How many loads, each equal to a stere, must be drawn away in digging a ditch .4 Km. long, by .3 m. deep and 1 m. wide?

   Ans.....
6. Find the diameter of a circle whose circumference is 132 ft.

   Ans.....
7. Find the radius of a circle whose circumference is 176 in.

   Ans.....
8. How deep is a vat which contains 27,000 l. if the base is 3 m. sq.?

   Ans.....
9. Find the height of a parallelogram whose area is 3 sq. yds. and length $6\frac{3}{4}$ ft.

   Ans.....
10. Cost of whitewashing the four walls of a room 8 m. long, 7 m. wide, and 5 m. high, at 4c. a sq. m.?

    Ans.....

MENTAL VII.—62.

1. Compound int. on $50 at 6%—2 yrs.?

Ans.....

2. Find the length of a rhombus whose area is 9⅓ sq. yds. and height 10½ ft.

Ans.....

3. How many pounds in 10 litres? in 2 Hl.? in 1 dl.?

Ans.....; .....; .....

4. What is the diameter of a water tank whose circumference is 35 in.?

Ans.....

5. If 6 men out of a company of 66 are killed, what is the death rate %?

Ans.....

6. At $1.25 for 5 litres of oil what will one cu. m. cost?

Ans.....

7. What will be the cost of sodding a triangular plot, base 10 yds.; p. h. 4½ ft., at 20c. per sq. yd.?

Ans.....

8. What is the int. on $40 at 3% for 4 mos.?

Ans.....

9. 250 Kg. at $8 a ton.

Ans.....

10. How many times can you fill a measure that holds 5 l. from a vat that holds .2 steres?

Ans.....

MENTAL VII.—63.

1. How many cu. cm. does it take to weigh a g.? a Kg.? a Hg.?

   Ans.....; .....; .....

2. Find the time it will take $1 to double itself at $8\frac{1}{3}\%$.

   Ans.....

3. How many triangles 6 in. base x 8 in. p. h. can be cut out of 3 sq. ft.?

   Ans.....

4. A windmill pumps a stere of water in 15 minutes. How many hours will it take to fill a cistern which holds 80,000 cu. dm.?

   Ans.....

5. Give Prime Factors of 81.

   Ans.....

6. Find the p. h. of a triangle. Area 54 sq. ft., base 10.8 ft.

   Ans.....

7. What is the area of the equator circle cut from a globe whose diameter is 7 in.?

   Ans.....

8. $\dfrac{4}{1\frac{1}{3} \div 2\frac{1}{4}} =$ .....

9. A pipe carries 2 Hl. of water an hour, how many Kl. a day?

   Ans.....

10. How many cu. in. in a box 6 inches each edge?

    Ans.....

MENTAL VII.—64.

1. If 100 pins are placed in every cu. in. of a box 6 in. each edge, how many will it hold?

   Ans.....

2. What is the circumference of a wire whose diameter is .63 in.?

   Ans.....

3. When the difference in solar time between two cities is 4 hrs. 5 min., what is the difference in longitude?

   Ans.....

4. $\frac{14-9}{7+6} =$ .....

5. Change 893 sq. Dm. to Ha.; to a.; to ca.

   Ans.....; .....; .....

6. A school flag pole has a circumference of 11 in. at the base. Find its diameter and area at the cross section.

   Ans.....; .....

7. Find the cost of engraving a triangle, base 2 in., p. h. 3 in., at 10c. a sq. in.

   Ans.....

8. Write 28 cu. m., 14 cu. dm., having cu. m. as the unit.

   Ans.....

9. Divide a field 150 rods x 320 rods into triangles whose dimensions are 5 rods x 4 rods. How many are there?

   Ans.....

10. A soda syphon holds $1\frac{1}{2}$ l.; how many Hl. will a person drink in a year if he drinks a syphon a week?

    Ans.....

MENTAL VII.—65.

1. An oil lamp burns 2 dl. of oil a day, how many Hl. in 20 weeks?

Ans.....

2. What decimal of a year's int. will 2 mos. yield?

Ans.....

3. Find the height of a triangle whose area is 9 sq. yds. and base $4\frac{1}{2}$ ft.

Ans.....

4. Change (showing all steps on your paper) 1 stere to litres; 48 Hk to steres.

Ans.....

Ans.....

5. Give H. C. F. of 154 and 110.

Ans.....

6. A boy swings a ball tied to a yard and a half of string. What is the length of the circumference described by the ball as it is swung around?

Ans.....

7. Value of $11\frac{2}{3} - 1\frac{7}{12} - 9\frac{1}{6}$.

Ans.....

8. Change 463 Hl. to cu. dm.; to cu. m.

Ans.....; .....

9. Find the total area of a 6 in. cube.

Ans.....

10. When the difference in time between two towns is 5 hrs. 8 min., find difference in longitude.

Ans.....

MENTAL VII.—66.

1. In 2174 ares how many sq. m.? sq. Hm.? sq. Dm.?

   Ans.....

2. State the height of a rhomboid whose area is 7½ sq. ft. and length 2 yds.

   Ans.....

3. $\frac{3 \times 8}{3 + 8} =$ .....

4. Find the cost of over-laying a 6-inch cube with gold leaf at $1 per sq. ft.

   Ans.....

5. How many l. in a water cart 2 m. long, 1.5 m. wide, and 8 dm. deep?

   Ans.....

6. What is the area of the circle described by swinging a ball tied to a yard and a half of string?

   Ans.....

7. A sleigh box holds a stere. How many loads needed to remove snow from a rink 40 m. long and 20 m. wide, if the snow is 5 dm. deep?

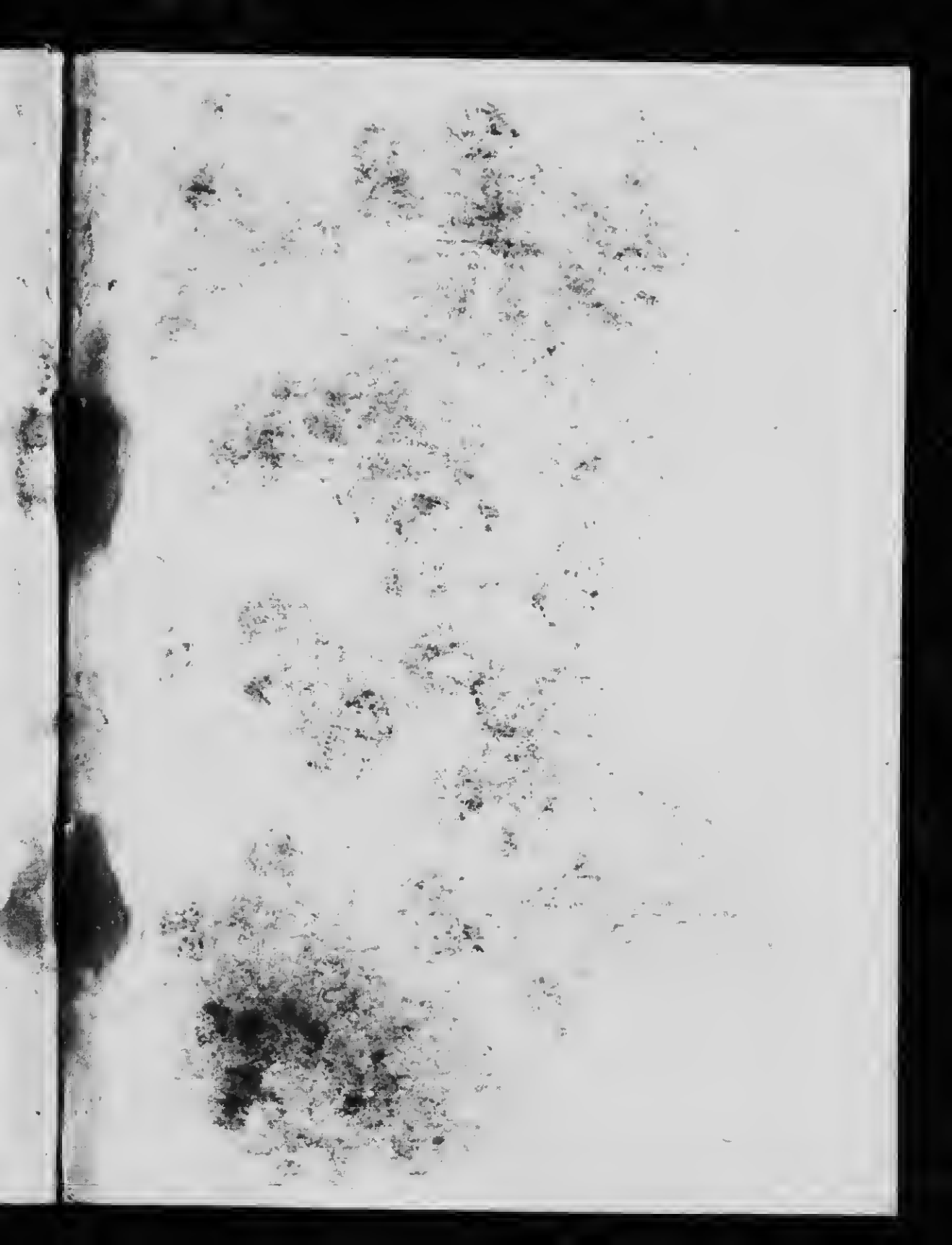
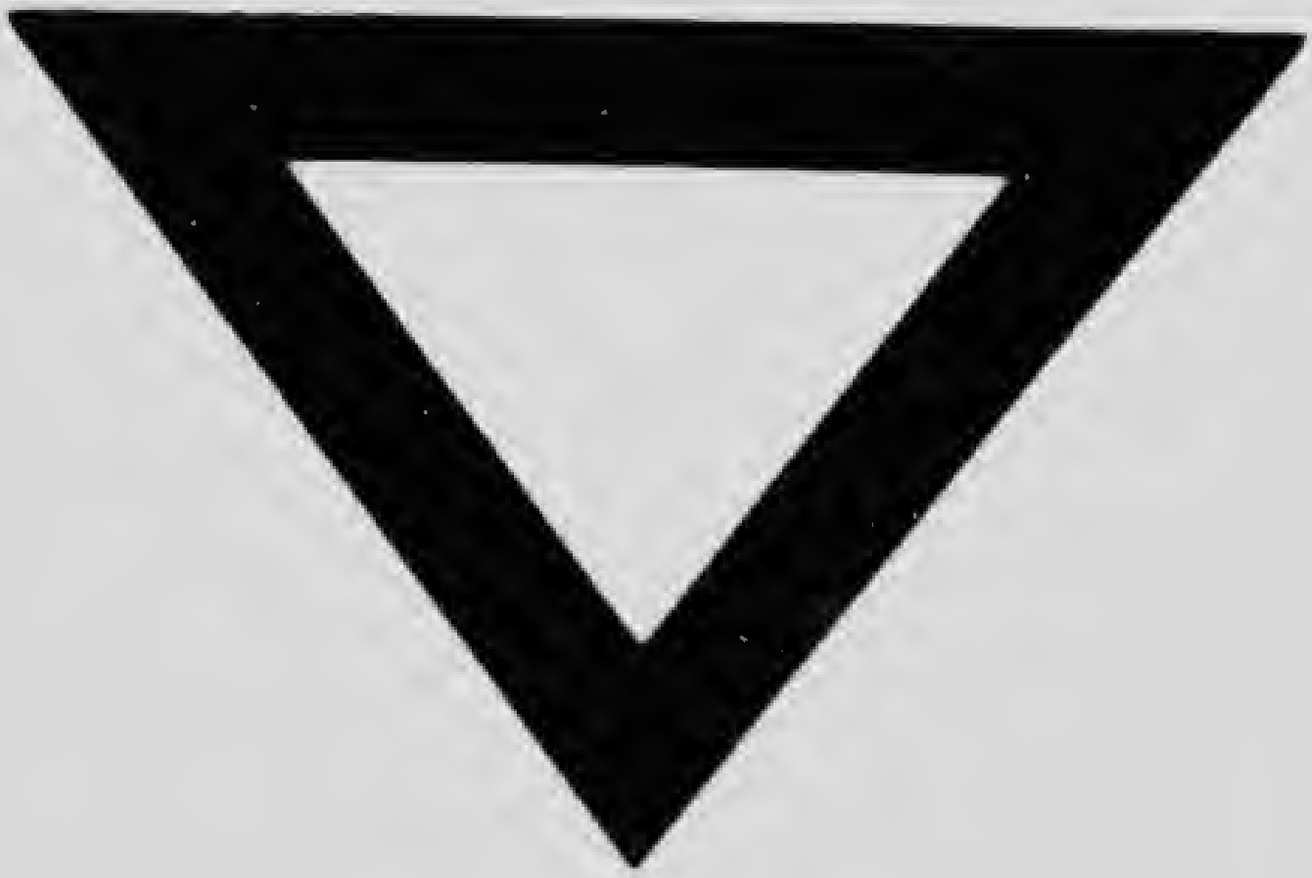
   Ans.....

8. Find the base of a triangle, area being 1 acre and p. h. 16 rods.

   Ans.....

9. Cost of 8 Hl. at 4c. a dl.?

   Ans.....

10. Exchange 4 M. tons of hay worth $[illegible] sugar worth 12c. a Kg. How many Kg. of [illegible]t?

    Ans.....