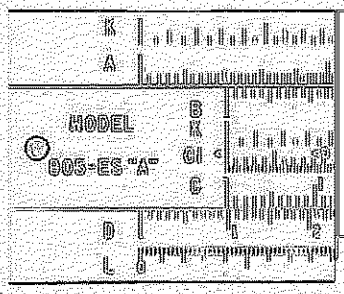

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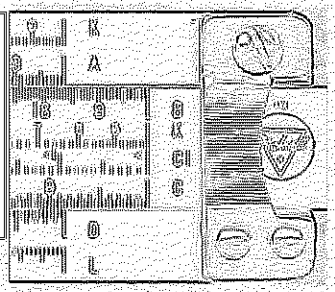
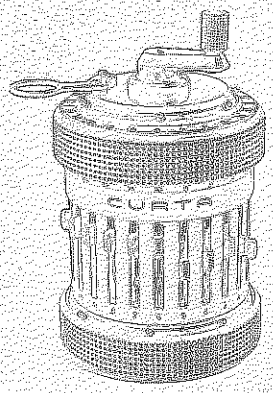
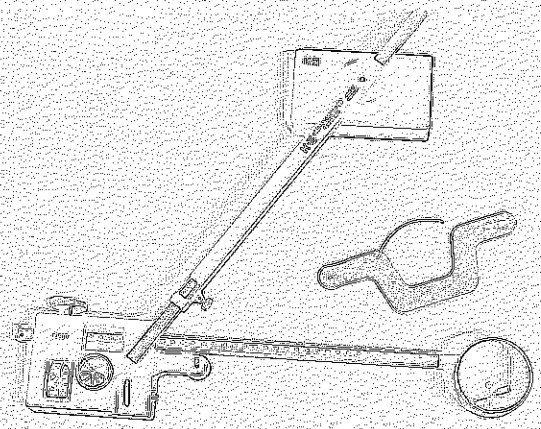
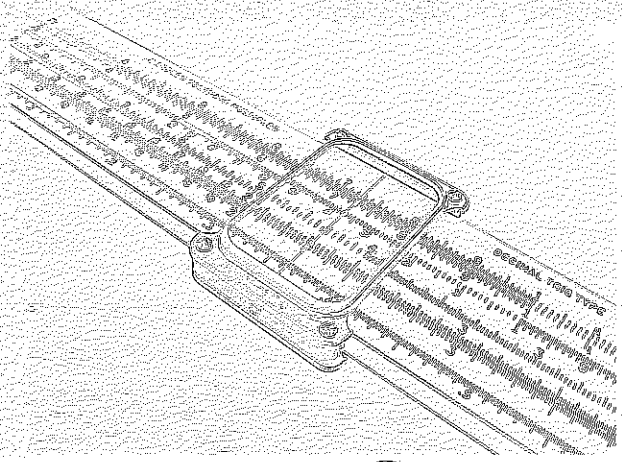
E-Mail - webmaster@texasmath.org

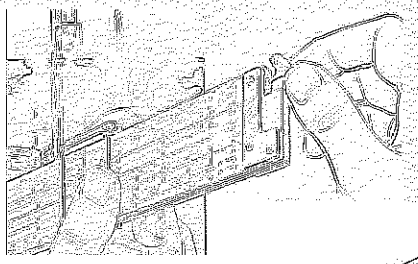


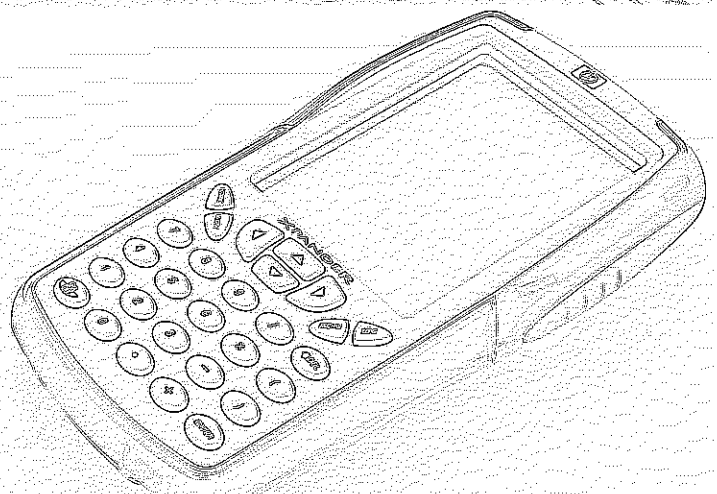
1962-63 UIL Number Sense
(17 pages)

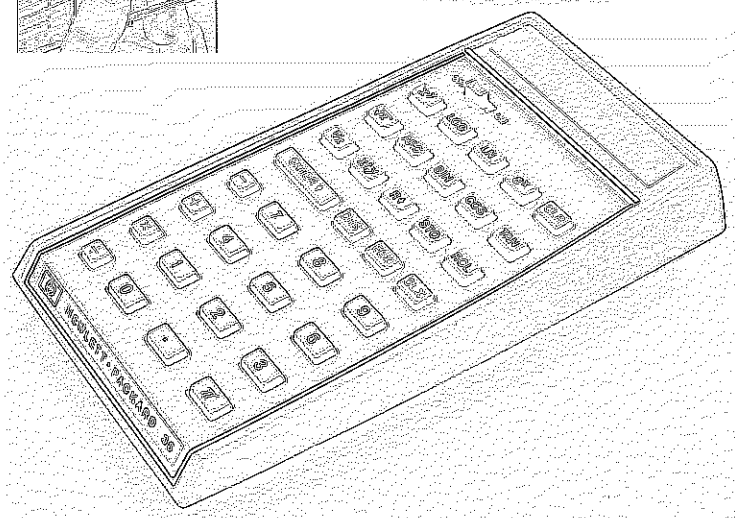


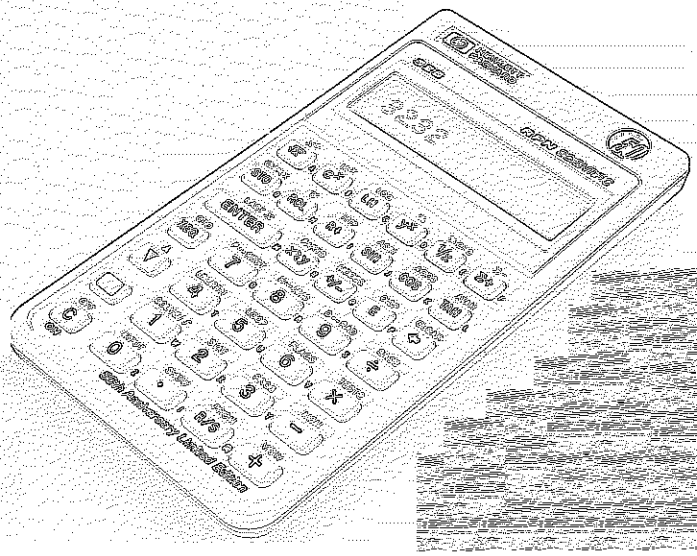


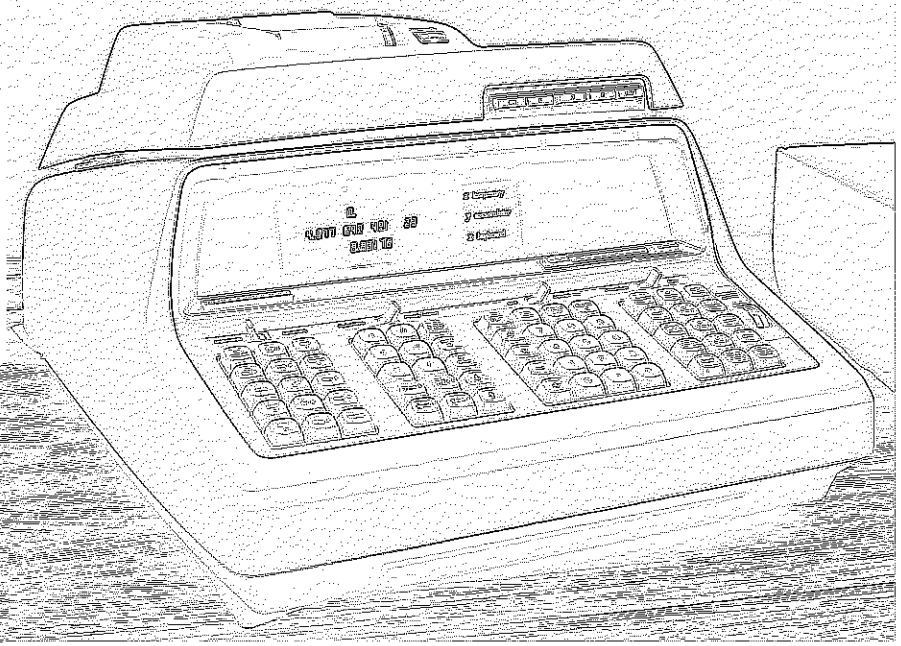












The University of Texas Interscholastic League

Number Sense Test, Series V-1

Contestant's Number..... Contestant's Score.....

Read Directions Carefully Before Beginning Test

Do Not Unfold This Sheet Until Told to Begin

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Stop—Wait for Signal

(1) $4\times47=$ .....

(2) $47+178=$ .....

(3) $311-186=$ .....

(4) $208\div16=$ .....

(5) $312-187-25=$ .....

(6) One-half of $27\frac{1}{2}$ is .....

(7) $1/3+5/9=$ .....

(8) $1\frac{3}{4}\times3/7=$ .....

(9) $3\frac{5}{8}+1\frac{1}{8}-2\frac{1}{4}=$ .....

*(10) A car traveled 267 miles on $6\frac{1}{2}$ gallons of gasoline. Estimate the number of miles per gallon. .....mi.

(11) If a car travels 16 miles on one gallon of fuel, how many gallons are required for a trip of 416 miles? .....gal.

(12) Find the cost of fuel for the trip at 32¢ a gallon.

$.....

(13) 216 inches = ...ft.

(14) 19 feet = ...in.

(15) Find the sum of $4.42, $3.89, and $6.58. $.....

(16) Subtract $17.66 from $31.11. $.....

(17) Find the interest on $16 for one year at $4\frac{3}{4}$%. .....¢.

(18) Find the area of a triangle of base 21 in. and altitude 22 in.

..... sq. in.

(19) Find the average of 44, 52, 68, and 28. .....

*(20) $3612\div43=$ .....

(21) Find the area of a parallelogram of base 22 feet and altitude 21 feet. ..... sq. ft.

(22) $8\frac{1}{3}$ is to 50 as $7\frac{1}{3}$ is to .....

(23) $7\frac{1}{2}$ is to 30 as ..... is to 22.

(24) $44\div7\frac{1}{3}=$ .....

(25) Write in figures: eighty three and three-eighths million.

.....

(26) One-fourth of $27\frac{1}{2}$ is .....

(27) Three-fourths of $27\frac{1}{2}$ is .....

(28) Convert 14 dollars into pesos at $12\frac{1}{2}$ pesos to the dollar.

..... pesos.

(29) Convert 525 pesos into dollars at $12\frac{1}{2}$ pesos to the dollar.

..... dollars.

*(30) Convert 2790 pesos into dollars at 12.4 pesos to the dollar.

..... dollars.

(31) If 60 miles an hour is equivalent to 100 kilometers an hour, then 36 miles an hour is equivalent to ..... kilometers an hour.

(32) A box contains a dozen pears, a dozen oranges, and a dozen apples. A piece of fruit is taken from the box at random. Find the probability that it is either an apple or a pear. .....

(33) Find the fifth term of the sequence $2\frac{1}{2}$, $7\frac{1}{2}$, $22\frac{1}{2}$, $67\frac{1}{2}$, . . .

.....

(34) $25\times14=$ .....

(35) $12\frac{1}{2}\times14=$ .....

(36) $14\times75=$ .....

(37) $37\frac{1}{2}\times14=$ .....

(38) $175\div12\frac{1}{2}=$ .....

(39) Find the sum: $2\frac{1}{2}+7\frac{1}{2}+22\frac{1}{2}+67\frac{1}{2}+202\frac{1}{2}$.

.....

*(40) Convert 1175 kilometers into miles, assuming that 100 kilometers are equivalent to 62 miles. .....mi.

(41) Find the cost of 14 gallons of gas at $25\frac{1}{2}$¢ a gallon.

$.....

(42) Find the cost of 16 gallons of gas at 25½¢ a gallon.

$.....

(43) Find the cost of 16⅔ gallons of gas at 25¢ a gallon.

$.....

(44) 21⅔—15 8/9= .....

(45) 21⅔+15 8/9= .....

(46) 21⅔—5 7/9= .....

(47) 20⅔—1 5/18—14 8/9= .....

(48) 4½×3 5/9= .....

(49) 3 5/9×3⅜×4½= .....

*(50) The interest on a sum of money for one year at 6% is $166.66. Find the sum of money. $.....

(51) ⅝ is one-half of what number? .....

(52) ⅝ is what per cent of 2½? .....%.

(53) ⅝ is what per cent more than ½? .....%.

(54) ⅝ is what per cent less than ⅞? .....%.

(55) Subtract $28.49 from the sum of $18.89 and $16.37.

$.....

(56) Subtract the sum of $16.37 and $18.89 from $36.91.

$.....

(57) Subtract the sum of $13.76 and $15.12 from the sum of $12.25 and $28.86. $.....

(58) If the tax on a house valued at $13,000 is $650, find the tax rate.

.....%.

(59) Find the tax on a lot valued at $5750, if the tax rate is 3%.

$.....

*(60) A rancher owns 2875 acres of land. He sells 805 acres. What per cent of his land does he retain? .....%.

(61) 78×2⅓= .....

(62) 78×2⅝= .....

(63) 4⅔×39= .....

(64) (78×2⅓) + (78×2⅔) = ...

(65) (78×4⅙) — (78×2⅔) = ...

(66) 182÷2⅓= .....

(67) 91÷1⅙= .....

(68) 182÷1⅙= .....

(69) 91÷2⅓= .....

*(70) If a space ship travels 17,400 miles an hour, how long will it require to orbit the earth ten times, assuming that the length of each orbit is 28,000 miles? .....hrs.

(71) Three dimes are tossed. What is the probability that at least one head will show? .....

(72) A speed of 33 feet a second is equivalent to how many miles an hour? .....m.p.h.

(73) What is the square root of 56¼ ? .....

(74) 2½×26½= .....

(75) The perimeter of a square decreases from 58 in. to 48 in. Find the corresponding decrease in the area. .....sq. in.

(76) An employee receives a 5% increase in wages and now earns $567 a month. How much did he earn before the increase?

$.....

(77) A box contains two red balls and two white balls. Two balls are taken at random from the box. What is the probability that both are red? .....

(78) The area of a square is increased from 12¼ sq. in. to 30¼ sq. in. Find the corresponding increase in the perimeter.

..... in.

(79) Find the ninth term of the sequence 39, 36½, 34, 31½, . . .

.....

*(80) Estimate the radius of a circle of circumference 52 in.

..... in.

The University of Texas Interscholastic League
Number Sense Test, Series V-2

Contestant's Number..... Contestant's Score.....

Read Directions Carefully Before Beginning Test

Do Not Unfold This Sheet Until Told to Begin

Directions: Do not turn this page until the person conducting the test gives the signal to begin. This is a ten-minute test. There are 80 problems. Solve accurately and quickly as many as you can in the order in which they appear. ALL PROBLEMS ARE TO BE SOLVED MENTALLY. Make no calculations with paper and pencil. Write only the answer in the space provided at the end of each problem. Problems marked with a star (*) require only approximate answers; any answer to a starred problem that is within five per cent of the exact answer will be scored correct; all other problems require exact answers.

Person conducting contest should explain these directions carefully to the contestants.

Stop—Wait for Signal

(1) 56+68= .....

(2) 206—118= .....

(3) 207—119+112= .....

(4) 17×8= .....

(5) 17×8½= .....

(6) 192÷12= .....

(7) ½×21½= .....

(8) 3¼—1⅝+1⅜= .....

(9) The square root of 2¼ is .....

*(10) Estimate the value of 165 acres of land at $125 an acre.
$.....

(11) Find the area of a triangle of base 17 in. and altitude 17 in.
..... sq. in.

(12) 192 inches= .....ft.

(13) 24 feet= .....in.

(14) 171 square feet= .....sq. yds.

(15) 144½÷8½= .....

(16) Find the interest on $2600 for one year at 6½% a year.
$.....

(17) Find the cost of 17 gallons of gas at 32¢ a gallon.
$.....

(18) Find the cost of 15½ gallons of gas at 32¢ a gallon.
$.....

(19) Find the cost of 17 gallons of gas at 34¢ a gallon.
$.....

*(20) Estimate the tax on 180 million gallons of gasoline at 7¾¢ a gallon. $.....

(21) 50×44= .....

(22) 25×44= .....

(23) 75×44= .....

(24) 25¾×44= .....

(25) 25¼×44⅝= .....

(26) 3300÷44= .....

(27) 44×2575= .....

(28) 2525×448= .....

(29) 755×44= .....

*(30) If one mile is equivalent to 1.61 kilometers, convert 877 kilometers into miles. .....mi.

(31) Write in figures: three and one eighth billion.
.....

(32) 37½% of $3248= $.....

(33) 18¾% of $3232= $.....

(34) 41—18⅜= .....

(35) 42½—18⅝= .....

(36) 42½—14¾—18⅞= .....

(37) 1 5/9 is what per cent of 6 2/9? .....%.

(38) 5⅝ is what per cent less than 11⅛? .....%.

(39) 8⅜ is what per cent more than 5⅜? .....%.

*(40) If one mile is equivalent to 1.61 kilometers, convert 78 square miles in square kilometers.
..... sq. kil.

(41) Convert 3750 pesos into dollars at 12½ pesos to the dollar.
..... dollars.

(42) Convert 300 dollars into pesos at 12.4 pesos to the dollar.
..... pesos.

(43) If a furlong is one-eighth of a mile, then three furlongs are equivalent to ..... yds.

(44) 990 yards are equivalent to
..... furlongs.

(45) If one English pound is equivalent to 2⅘ dollars and one dollar is equivalent to 12½ pesos, convert 125 pounds into pesos.
..... pesos.

(46) A savings account contains \$811.30. \$186.50 is withdrawn. How much remains in the account? \$.....

(47) Subtract \$149.57 from the sum of \$88.95 and \$267.86.

\$.....

(48) If a factory produces 520 bicycles one month and 546 bicycles the next month, by what per cent does production increase?

..... %.

(49) If a person's salary is lowered from \$520 a month to \$481 a month, by what per cent is the salary cut? ..... %.

*(50) If an employee receives a 6½% cut in salary and now earns \$785.40 a month, how much did he earn before the cut?

\$..... a month.

(51) $6\frac{1}{2} \times 68 =$ .....

(52) $68 \times 7\frac{1}{2} =$ .....

(53) $7\frac{1}{4} \times 68 =$ .....

(54) $6\frac{3}{4} \times 68 =$ .....

(55) $6\frac{1}{2} \times 7\frac{1}{2} \times 68 =$ .....

(56) $510 \div 7\frac{1}{2} =$ .....

(57) How far can you travel in 20 minutes at 51 miles an hour?

..... mi.

(58) How long does it take to cover 442 miles at 68 miles an hour?

..... hrs.

(59) How fast should you drive in order to cover 341 miles in 6 hours and 12 minutes? ..... mi. an hr.

*(60) If a rocket travels 2640 feet a second, how long will it take it to cover 15,300 miles? ..... hrs.

(61) Subtract the sum of \$46.67 and \$87.88 from \$154.45.

\$.....

(62) Subtract the sum of \$86.67 and \$47.88 from the sum of \$73.66 and \$80.69. \$.....

(63) 12½% of $8\frac{3}{8} =$ .....

(64) $6\frac{1}{4}\%$ of $880 =$ .....

(65) 37½% of \$8.80 = \$.....

(66) $8\frac{3}{8} \times 12\frac{1}{2} =$ .....

(67) $17\frac{3}{8} \times 6\frac{1}{4} =$ .....

(68) $8\frac{3}{8} \times 6\frac{1}{4} =$ .....

(69) A wall measures 21 feet by 12 feet. Find the cost of painting it at 23¢ a square yard. \$.....

*(70) How many feet does the tip of the minute hand of a clock travel in 24 hours, if the length of the minute hand is 5 inches?

..... ft.

(71) A card is taken at random from an ordinary deck of 52 cards. What is the probability that it is a club or a king?

.....

(72) The base of a right triangle is 6 inches, and the hypotenuse is 7½ inches. Find the altitude. ..... in.

(73) Find the area of a rectangle of base 4½ inches and diagonal 7½ inches. ..... sq. in.

(74) Find the altitude of a triangle of base 17 inches and area 144½ square inches. ..... in.

(75) The perimeter of a square is increased from 18 inches to 30 inches. Find the corresponding increase in the area.

..... sq. in.

(76) A box contains 3 red balls and 5 blue balls. Two balls are taken at random from the box. Find the probability that one is red and one is blue. .....

(77) The diagonal of a square is decreased from 8 inches to 6 inches. Find the corresponding decrease in the area.

..... sq. in.

(78) $12^3 - 11^3 =$ .....

(79) $\sqrt{45^2 + 60^2} =$ .....

*(80) The diagonal of a square is decreased from 8 inches to 6 inches. Estimate the corresponding decrease in the perimeter.

..... in.

The University of Texas Interscholastic League
Number Sense Test, Series V-3

Contestant's Number..... Contestant's Score.....

Read Directions Carefully Before Beginning Test

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Stop—Wait for Signal

(1) 57+66= .....

(2) 213—88= .....

(3) 213—56—67= .....

(4) 12½×14= .....

(5) 210÷14= .....

(6) One-third of 63⅜ = ...

(7) 72 is what per cent of 900? .....%.

(8) 7⅞+9¼ = ...

(9) 8¼—6⅞ = ...

*(10) Estimate the value of 218 acres of land at $64 an acre.

$.....

(11) 5% of $13,960= $.....

(12) 15% of $13,960= $.....

(13) 7½% of $13,960= $.....

(14) Find the area of a triangle of base 25 inches and altitude 14 inches.

..... sq. in.

(15) Find the interest on $5600 for one year at 4¾ % a year.

$.....

(16) Find the base of a triangle of altitude 13 inches and area 71½ square inches. ..... in.

(17) Find the sum of $8.54, $7.88, and $7.47. $.....

(18) Subtract $13.77 from $41.12. $.....

(19) Subtract the sum of $7.88 and $5.89 from $42.13. $.....

*(20) If the value of 218 acres of land is $17,004, estimate the value of one acre. $.....

(21) ⅘×3¾ = ...

(22) 3¾×1⅗ = ...

(23) 1⅗×3¾×1½= .....

(24) 24÷1⅗ = ...

(25) 6÷1⅗ = ...

(26) 36÷2⅖ = ...

(27) (26¾×12)+(24×11⅝) = ...

(28) (12×26¾)—(24×11⅝) = ...

(29) If 12½ pesos are equivalent to one dollar, then 275 pesos are equivalent to ..... dollars.

*(30) If 100 lire are equivalent to 16¢, then $51.52 is equivalent to ..... lire.

(31) How many pegs can be bought for $48 at 16¢ each?

.....

(32) 153÷17= .....

(33) 153÷8½= .....

(34) If 8500 pegs cost $153, find the cost per thousand.

$.....

(35) 76½÷8½= .....

(36) 25×8⅘= .....

(37) 8⅘×12½= .....

(38) Convert $8.80 into pesos at 12½ pesos to the dollar.

..... pesos.

(39) 220÷8⅘= .....

*(40) Estimate the area of a triangle each side of which is 10 inches long.

..... sq. in.

(41) 55 is what per cent more than 44? .....%.

(42) 44 is what per cent less than 55? .....%.

(43) 6⅞ is what per cent more than 5½? .....%.

(44) 5½ is what per cent of 6⅞ ? .....%.

(45) 5½ is what per cent less than 6⅞ ? .....%.

(46) Find the cost of 17 gallons of gas at 27¢ a gallon.

$.....

(47) Find the cost of 19 gallons of gas at 27¢ a gallon.

$.....

(48) Find the cost of 17 gallons of gas at 29¢ a gallon.

$.....

(49) Find the cost of 18¾ gallons of gas at 28¢ a gallon.

$.....

*(50) Estimate the circumference of a circle of area 16 square inches.

..... in.

(51) How long does it take to drive 464 miles at 58 miles an hour?

..... hrs.

(52) How fast must you drive in order to cover 48 miles in 45 minutes?

..... m.p.h.

(53) How long will it take to travel 672 miles at 56 miles an hour?

..... hrs.

(54) How far can you travel in 12 hours at 57 miles an hour?

..... mi.

(55) How far can you travel in 12 hours 45 minutes at 56 miles an hour?

..... mi.

(56) How far can a rocket travel in 3 hours 20 minutes at 1320 feet a second? ..... mi.

(57) How long will it take a rocket traveling 1320 feet a second to cover 9000 miles? ..... hrs.

(58) A speed of 345 miles an hour is equivalent to how many feet a second? ..... ft.

(59) A speed of 418 feet a second is equivalent to how many miles an hour? ..... m.p.h.

*(60) How long does it take a rocket traveling 23,800 feet a second to cover 850,000 miles? ..... hrs.

(61) Trunk A holds 20% more than trunk B, and trunk B holds 25% more than trunk C. How much more does A hold than C?

..... %.

(62) If eight steaks, weighing 14 ounces each, sell for $16.80, find the price per pound. $.....

(63) If a stick of smoked sausage weighing ⅝ oz. sells for 15¢, find the equivalent selling price per pound. $.....

(64) Find the tax on fourteen million gallons of gasoline at 9½¢ a gallon. $.....

(65) A savings account contains $468.74. $175.75 is withdrawn. Later, $58.26 is deposited. Find the amount now in the account.

$.....

(66) A worker receives a 5% increase in wages and now earns $90.30 a week. How much did he earn before the raise?

$..... a week.

(67) A poultry man cuts his production of chickens by 8% and now produces 736 a month. How many did he produce each month before the cut? .....

(68) If the tax on gasoline is 6½¢ a gallon, how many gallons must be taxed in order to yield $40,300 in revenue? ..... gal.

(69) $403 \div 6\frac{1}{2} =$ .....

*(70). A poultry man increases his production of chickens from 588 a week to 637 a week. By what per cent does production increase?

..... %.

(71) A card is drawn at random from an ordinary deck of 52 cards. Find the probability that it is either a jack or a diamond.

.....

(72) The square root of $5\frac{1}{16}$ is .....

(73) Two dice are rolled. Find the probability that either a 3 or 4 will show. .....

(74) The perimeter of a square is increased from 23½ inches to 39½ inches. Find the corresponding increase in the area.

..... sq. in.

(75) The area of a right triangle is 216 square inches, and the base is 24 inches. Find the hypotenuse. ..... in.

(76) A ball is taken at random from a box that contains 11 red balls, 13 green balls, and 9 white balls. Find the probability that the ball is either green or red. .....

(77) $(35\frac{1}{3})^2 - (14\frac{1}{3})^2 =$ .....

(78) $(2\frac{1}{2})^3 - (1\frac{1}{2})^3 =$ .....

(79) A box contains one red ball and 4 green balls. Two balls are taken at random from the box. Find the probability that one is red and one is green. .....

*(80) The diameter of a circle is increased from 14½ inches to 22½ inches. Estimate the corresponding increase in the area.

..... sq. in.

The University of Texas Interscholastic League
Number Sense Test, Series V-4

Contestant's Number..... Contestant's Score.....

Read Directions Carefully Before Beginning Test

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Stop—Wait for Signal

(1) $75 \div 138 =$ .....

(2) $221 - 88 =$ .....

(3) $13 \times 18 =$ .....

(4) $222 - 89 - 43 =$ .....

(5) $238 \div 14 =$ .....

(6) $(12 \times 13) + (18 \times 13 =$ .....

(7) $13\frac{3}{8} \times 18 =$ .....

(8) $14\frac{3}{4} + 9\frac{3}{8} - 8\frac{5}{8} =$ .....

(9) $59\frac{1}{2} \div 3\frac{1}{2} =$ .....

*(10) If 10 liters are equivalent to 2.64 gallons, then 35 liters are equivalent to ..... gals.

(11) $119 \div 3\frac{1}{2} =$ .....

(12) Find the area of a triangle of base 35 inches and altitude 14 inches. ..... sq. in.

(13) How many shirts at $3.50 each can be bought for $59.50?

.....

(14) Find the sum of $7.45, $18.86, and $17.65. $.....

(15) $37.64—$18.86= $.....

(16) Subtract $28.85 from $47.63. $.....

(17) Find the altitude of a triangle of area 78 square inches and base 13 inches. ..... in.

(18) Find the perimeter of a right triangle whose legs are 5 inches and 12 inches. ..... in.

(19) Find the longest side of a triangle two of whose sides are 38 inches and 28 inches and whose perimeter is 95 inches. ..... in.

*(20) If 10 liters are equivalent to 2.64 gallons, then 10 gallons are equivalent to ..... liters.

(21) $11\frac{1}{4} - 7\frac{5}{8} + 8\frac{3}{8} =$ .....

(22) $11\frac{1}{4} - 8\frac{3}{8} + 7\frac{5}{8} =$ .....

(23) $28\frac{3}{8} - 9\frac{5}{8} - 11\frac{1}{4} =$ .....

(24) $11\frac{1}{4} - 7\frac{7}{8} + 8\frac{5}{8} =$ .....

(25) $11\frac{1}{4} - 7\frac{5}{8} + 8\frac{3}{8} - 6\frac{1}{2} =$ .....

(26) Find the cost of 15 gallons of gas at 31¢ a gallon.

$.....

(27) Find the cost of 15 gallons of gas at 29¢ a gallon.

$.....

(28) Find the cost of 15 gallons of gas at 41¢ a gallon.

$.....

(29) Find the cost of 19 gallons of gas at 31¢ a gallon.

$.....

*(30) How many gallons of gas can be bought for $9.89 at 43¢ a gallon?

..... gal.

(31) 6 is what per cent more than $4\frac{4}{5}$? ..... %.

(32) $5\frac{3}{5}$ is what per cent less than 7? ..... %.

(33) 102 is what per cent of 340? ..... %.

(34) $4\frac{4}{5}$ is what per cent less than 6? ..... %.

(35) Convert 22 dollars into pesos at $12\frac{1}{2}$ pesos to the dollar.

..... pesos.

(36) If dinner for two costs 124 pesos, find the cost in dollars at $12\frac{4}{5}$ pesos to the dollar. ..... dollars.

(37) If the first volume of a set of reference books sells for 39¢ and each of the remaining 24 volumes for 98¢, find the cost of the entire set. $.....

(38) If one English pound is equivalent to $2.80, find the cost in dollars of a Jaguar car priced at 2200 pounds. $.....

(39) Find the cost in pounds of a Ford car priced at $3080.

..... pounds.

*(40) If one English pound is equivalent to $2\frac{4}{5}$ dollars and $12\frac{1}{2}$ pesos are equivalent to one dollar, convert 28,000 pesos into pounds.

..... pounds.

(41) $2\frac{4}{5} \times 12\frac{1}{2} =$ .....

(42) $70 \div 2\frac{4}{5} =$ .....

(43) 18 is to 15 as 48 is to .....

(44) Write in figures: twenty-one and five-eighths billion.

.....

(45) How many thousands in nine and three-eighths million?

.....

(46) If shirts sell for $3.79 each or four for $13.96, how much is saved by buying four? $.....

(47) Find the average of 48½, 27⅞, 68, and 59⅝. .....

(48) Find the tax on a house valued at $8500 if the tax rate is 3.6%.

$.....

(49) If 350 pegs cost $34.30, find the cost per thousand.

$.....

*(50) If a rocket travels 18,375 feet a second, how long will it take it to cover nine and three-eighths million miles?

..... hrs.

(51) If a car travels 126 miles in 2 hours 48 minutes, what is its speed in miles per hour? ..... m.p.h.

(52) 343÷3½= .....

(53) How far can you drive in 7 hours 40 minutes at 57 miles an hour?

..... mi.

(54) 126÷2⅘= .....

(55) How long does it take to drive 399 miles at 57 miles an hour?

..... hrs.

(56) (18½×34)+(21½×34)= .....

(57) (9¼×34)+(21½×17)= .....

(58) (9¼×68)+(34×21½)= .....

(59) (68×21¼)—(34×38½)= .....

*(60) At what speed should you drive in order to cover 980½ miles in 18½ hours? ..... m.p.h.

(61) Find the tax on 875,000 gallons of gasoline at 11¢ a gallon.

$.....

(62) 437÷7⅔= .....

(63) If the tax on 375,000 gallons of gas is $26,250, find the tax on 100,000 gallons. $.....

(64) If the tax on gasoline is 7¢ a gallon, how many gallons must be taxed in order to yield $26,250 in revenue? ..... gal.

(65) If a company increases its production of bicycles by 5% and now produces 357 bicycles a month, how many did it make before the increase? ..... a month.

(66) If an employee receives a ten per cent cut in salary and now earns $738 a month, how much did he earn before the cut?

$..... a month.

(67) If a person earning $848 a month receives a five per cent increase in salary, how much does he now earn?

$..... a month.

(68) If a person's salary is cut from $660 a month to $561 a month, by what per cent is the salary lowered? .....%.

(69) Two dice are tossed. Find the probability that either 11 or 12 will show. .....

*(70) Estimate the area of a rectangle of base 10 inches and diagonal 14 inches. ..... sq. in.

(71) Two dice are tossed. Find the probability that neither 11 nor 12 will show. .....

(72) A speed of 285 miles an hour is equivalent to how many feet a second? ..... ft.

(73) A card is drawn at random from an ordinary deck of 52 playing cards. Find the probability that it is not a face card.

.....

(74) The base of a right triangle is 7 inches and the hypotenuse is 25 inches. Find the area. ..... sq. in.

(75) The perimeter of a square increases from 14½ inches to 22½ inches. Find the corresponding increase in the area.

..... sq. in.

(76) $(2\ 3/5)^2-(2\ 2/5)^2=$ .....

(77) The square root of 13 4/9 is .....

(78) A box contains 1 green ball and 5 blue balls. Two balls are taken at random from the box. Find the probability that one is blue and one is green. .....

(79) $(4\frac{1}{3})^3-(1\frac{1}{3})^3=$ .....

*(80) If the diameter of a circle is increased from 13½ inches to 21½ inches, find the corresponding increase in the area.

..... sq. in.

The University of Texas Interscholastic League
Number Sense Test, Series V-5

Contestant's Number..... Contestant's Score.....

Read Directions Carefully Before Beginning Test

Do Not Unfold This Sheet Until Told to Begin

Directions: Do not turn this page until the person conducting the test gives the signal to begin. This is a ten-minute test. There are 80 problems. Solve accurately and quickly as many as you can in the order in which they appear. ALL PROBLEMS ARE TO BE SOLVED MENTALLY. Make no calculations with paper and pencil. Write only the answer in the space provided at the end of each problem. Problems marked with a star (*) require only approximate answers; any answer to a starred problem that is within five per cent of the exact answer will be scored correct; all other problems require exact answers.

Person conducting contest should explain these directions carefully to the contestants.

Stop—Wait for Signal

(1) 81—39= .....

(2) 18×11= .....

(3) 145+88= .....

(4) 3¾×24= .....

(5) 191—49—68= .....

(6) 210÷14= .....

(7) 210÷15= .....

(8) 210÷7½= .....

(9) 13¼—8⅝+7⅜= .....

*(10) Estimate the cost of fencing a rectangular lot 25 yards wide and 40 yards deep at $3.25 a foot. $.....

(11) 22½ feet= ..... in.

(12) 90 inches= ..... ft.

(13) Find the area of a triangle of base 7½ inches and altitude 24 inches. ..... sq. in.

(14) Find the base of a triangle of area 210 square inches and altitude 15 inches. ..... in.

(15) 13¼—7⅜+8⅝= .....

(16) Find the sum of $5.76, $8.47, and $8.25. $.....

(17) Find the average of 56, 85, 73, and 66. .....

(18) Subtract $66.76 from $111.12. $.....

(19) Find the interest on $6400 for one year at 4¾%.
$.....

*(20) A savings bank pays $425.62 in annual interest on a deposit of $8185.00. Estimate the rate at which the bank pays interest.
..... %.

(21) Write in figures: seventeen and one-eighth million.
.....

(22) 25×44= .....

(23) 75×44= .....

(24) 50×44= .....

(25) 12½×44= .....

(26) 25×22×2⅛= .....

(27) A box contains 8 pears, 8 oranges, and 16 apples. A piece of fruit is taken from the box at random. What is the probability that it is either a pear or an apple? .....

(28) 550÷12½= .....

(29) Find the sixth term of the sequence 18, 15½, 13, 10½, . . .
.....

*(30) If 10 liters are equivalent to 2.64 gallons, then 17 gallons are equivalent to ..... liters.

(31) One-half of 23½= .....

(32) One-fourth of 23½= .....

(33) Three-fourths of 23½= .....

(34) 23½×2¼= .....

(35) 2½×23½= .....

(36) 23½÷5⅞= .....

(37) 70½÷11¾= .....

(38) How fast must you drive in order to cover 475 miles in eight hours twenty minutes? ..... m.p.h.

(39) How far can you drive in 7 hours 45 minutes at 56 miles an hour?
..... mi.

*(40) How long does it take to cover 610⅝ miles at 54½ miles an hour?
..... hrs.

(41) Find the cost of 76 liters of gas at 8¢ a liter.
$.....

(42) Find the cost of 76 liters of gas at 8½¢ a liter.
$.....

(43) Find the cost of 66 liters of gas at 8½¢ a liter.
$.....

(44) 44 is to 52 as 33 is to .....

(45) Find the cost of 76 liters of gas at 8¾¢ a liter.

$.....

(46) Subtract the sum of $18.42 and $15.82 from $43.20.

$.....

(47) Subtract $34.25 from the sum of $17.36 and $25.85.

$.....

(48) Subtract the sum of $18.38 and $15.78 from the sum of $17.35 and $25.86. $.....

(49) Add the sum of $25.86 and $17.35 to the sum of $15.78 and $18.38.

$.....

*(50) An investor has a sum of money invested at 4¾% a year. If his annual interest is $612.75, find the amount of his investment.

$.....

(51) 504 is what per cent more than 480? .....%.

(52) 323 is what per cent less than 340? .....%.

(53) ⅜ is what per cent of ⅔? .....%.

(54) ⅜ is nine-tenths of what number? .....

(55) Two dice are tossed. What is the probability that either a 4 or a 12 will show? .....

(56) Find the tax on a house valued at $9500 if the tax rate is 2.2%.

$.....

(57) If the tax on a house valued at $9500 is $380, what is the tax rate?

..... %.

(58) If the tax rate on a house is $285 and the tax rate is 3%, what is the valuation of the house? $.....

(59) How much should you deposit in a savings account that pays interest at the rate of 4¾% a year in order to have $419 in the account one year from now? $.....

*(60) 245,100÷19= .....

(61) 66×1⅔= .....

(62) 66×2⅔= .....

(63) (66×1⅔)+(66×3⅓)= .....

(64) (66×4⅓)—(66×2⅔)= .....

(65) (33×8⅔)—(66×2⅔)= .....

(66) If 450 pegs cost $117, find the cost per thousand.

$.....

(67) If trunk A holds 15% less than trunk B and trunk B holds 20% less than trunk C, then A holds whot per cent less than C?

..... %.

(68) If trunk A holds 15% less than trunk B and trunk B holds 20% less than trunk C, how much does A hold if C holds 75 cubic feet?

..... cu. ft.

(69) If trunk A holds 20% more than trunk B and trunk C holds 10% less than trunk B, then C holds what per cent less than A?

..... %.

*(70) If 10 liters are equivalent to 2.64 gallons, estimate the cost of 23½ gallons of gas at 8⅝¢ a liter. $.....

(71) A box contains 11 red balls, 17 white balls, and 12 green balls. A ball is taken at random from the box. What is the probability that it is either white or red? .....

(72) The square root of 18 7/9 is .....

(73) A box contains 6 green balls and 2 red balls. Two balls are taken at random from the box. Find the probability that one is red and one is green.

(74) The perimeter of a square increases from 12½ inches to 20½ inches. Find the corresponding increase in the area.

..... sq. in.

(75) The area of a square increases from 6¼ square inches to 7 1/9 square inches. Find the corresponding increase in the perimeter.

..... in.

(76) If two dice are tossed, what is the probability that neither a five nor a seven will show? .....

(77) The base of a right triangle is 1⅔ inches and the area is 3⅓ square inches. Find the hypotenuse. .....in.

(78) $(4\frac{1}{3})^2-(1\frac{2}{3})^2=$ .....

(79) $(11\frac{1}{3})^3-(10\frac{1}{3})^3=$ .....

*(80) The diameter of a circle decreases from 18½ inches to 10½ inches. Find the corresponding decrease in the area.

..... sq. in.

The University of Texas Interscholastic League

Number Sense Test, Series V-6

Contestant's Number..... Contestant's Score.....

Read Directions Carefully Before Beginning Test

Do Not Unfold This Sheet Until Told to Begin

Directions: Do not turn this page until the person conducting the test gives the signal to begin. This is a ten-minute test. There are 80 problems. Solve accurately and quickly as many as you can in the order in which they appear. ALL PROBLEMS ARE TO BE SOLVED MENTALLY. Make no calculations with paper and pencil. Write only the answer in the space provided at the end of each problem. Problems marked with a star (*) require only approximate answers; any answer to a starred problem that is within five per cent of the exact answer will be scored correct; all other problems require exact answers.

Person conducting contest should explain these directions carefully to the contestants.

Stop—Wait for Signal

(1) Five per cent of 842 = ...

(2) The area of a triangle of base 14½ inches and altitude 16 inches is ..... sq. in.

(3) The sum of $16.77 and $37.66 is $.....

(4) The difference of $37.66 and $16.77 is $.....

(5) Fifteen per cent of $842.00 is $.....

(6) 7½% of 842 is .....

(7) 266+477—578= .....

(8) 15×84⅙= .....

(9) 306÷18= .....

*(10) Estimate the cost of 8585 square feet of roofing at 8⅜¢ a square foot. $.....

(11) (17×18)—(16×19) = ...

(12) 175÷6¼ = ...

(13) 18⅜—9½+17¼ = ...

(14) (18×18)—(16×18) = ...

(15) (18×18)—(17×17) = ...

(16) Find the altitude of a triangle of area 120 square inches and base 13⅓ inches. ..... in.

(17) Find the interest on $7200 for one year at 4¼ %. $.....

(18) How much should be invested for one year at 4¼ % in order to earn $289 in interest? $.....

(19) At what annual rate of interest should $7400 be invested for one year in order to yield $333 in interest? .....%.

*(20) If 10 liters are equivalent to 2.64 gallons, estimate the cost of 22½ gallons of gasoline at 8½¢ a liter. $.....

(21) 4½×1½= .....

(22) 4½×2½= .....

(23) 4½×11½×1⅓= .....

(24) 4½×2½×1⅕= .....

(25) 6¾÷1½= .....

(26) Find the cost of 66 liters of gasoline at 8½¢ a liter.

$.....

(27) Find the cost of 56 liters of gasoline at 8½¢ a liter.

$.....

(28) Find the cost of 66 liters of gasoline at 6½¢ a liter.

$.....

(29) Find the cost of 72 liters of gasoline at 8¼¢ a liter.

$.....

*(30) If 100 lire are equivalent to 16¢, convert $38.40 into lire.

..... lire.

(31) Write in figures: eight and five-sixteenths billion.

.....

(32) Of 312 boys in a school, 247 play football, 188 play basketball, and 46 do not play either. How many play both football and basketball? .....

(33) How many play football only? .....

(34) How many play basketball only? .....

(35) How fast must you drive in order to cover 308 miles in 6 hours 25 minutes? ..... m.p.h.

(36) How long does it take to cover 408 miles at 48 miles an hour? ..... hrs.

(37) How far can you drive in 8 hours 35 minutes at 36 miles an hour? ..... mi.

(38) How far can you drive in 8 hours 55 minutes at 36 miles an hour? ..... mi.

(39) How fast must an airplane fly in order to cover 1232 miles in 6 hours 25 minutes? ..... m.p.h.

*(40) How long will it take a rocket traveling 13,300 feet a second to cover 240,000 miles? ..... hrs.

(41) 308÷6$\frac{5}{12}$= .....

(42) 36×8$\frac{11}{12}$= .....

(43) Trunk A holds 10% more than trunk B, and trunk C holds 20% less than trunk B. What per cent more does A hold than C? ..... %.

(44) What per cent more does B hold than C? ..... %.

(45) The dimensions of rectangle A are 24×32 inches and of rectangle B 24×40 inches. The area of A is what per cent less than that of B? ..... %.

(46) The area of rectangle B is what per cent greater than that of rectangle A? ..... %.

(47) The perimeter of rectangle A is what per cent less than that of rectangle B? ..... %.

(48) The area of rectangle A is what per cent of that of rectangle B? ..... %.

(49) The perimeter of rectangle A is what per cent of that of rectangle B? ..... %.

*(50) The circumference of a circle is increased from 27 inches to 82 inches. Estimate the corresponding increase in the radius. ..... in.

(51) $5 \times 1\frac{1}{4} =$ .....

(52) $5\frac{1}{3} \times 1\frac{1}{4} =$ .....

(53) $5\frac{1}{3} \times 1\frac{1}{4} \times 1\frac{1}{2} =$ .....

(54) $1\frac{1}{2} \times 6\frac{2}{3} =$ .....

(55) $4\frac{1}{2} \times 6\frac{2}{3} =$ .....

(56) $6\frac{2}{3} \times 2\frac{1}{4} =$ .....

(57) $4\frac{1}{2} \times 3\frac{1}{3} =$ .....

(58) $10 \div 6\frac{2}{3} =$ .....

(59) $15 \div 3\frac{1}{3} =$ .....

*(60) Estimate the number of revolutions of a wheel of diameter 36 inches in rolling 10 miles. .....

(61) If 480 pegs cost $36, find the cost per thousand. $.....

(62) If 240 pegs cost $36, find the cost per thousand. $.....

(63) If 480 pegs cost $45, find the cost per thousand. $.....

(64) If pegs cost $90 a thousand, find the cost of 450. $.....

(65) If pegs cost $85 a thousand, how many can you buy for $34? .....

(66) A pair of dice is rolled. Fnd the probability of rolling either a 5 or 6. .....

(67) Find the tax on twenty-six million gallons of gasoline at 8½¢ a gallon. $.....

(68) If the tax on twenty-six million gallons of gasoline is $1,950,000, find the tax on one gallon. .....¢.

(69) How many gallons of gasoline must be taxed at 8¢ a gallon to yield $1,200,000 in revenue? ..... gals.

*(70) If a furlong is one-eighth of a mile, estimate the number of square yards in one square furlong. ..... sq. yds.

(71) $(32 \times 91) - (16 \times 182) =$ .....

(72) $(32 \times 91) - (56 \times 52) =$ .....

(73) The perimeter of a square is increased from 22 inches to 34 inches. Find the corresponding increase in the area. ..... sq. in.

(74) The square root of $42\frac{1}{4}$ is .....

(75) The area of a square decreases from $42\frac{1}{4}$ square inches to $30\frac{1}{4}$ square inches. Find the corresponding decrease in the perimeter. ..... in.

(76) The altitude of a right triangle is 24 inches and the hypotenuse is 25 inches. Find the area. ..... sq. in.

(77) A box contains 5 green balls and 6 red balls. Two balls are taken at random from the box. Find the probability that one is red and the other is green. .....

(78) What is the probability that both balls are green? .....

(79) What is the probability that both balls are red? .....

*(80) Estimate the area of an equilateral triangle of perimeter 36 inches. ..... sq. in.

The University of Texas Interscholastic League
Number Sense Test, Series V-7

Contestant's Number..... Contestant's Score.....

Read Directions Carefully Before Beginning Test

Do Not Unfold This Sheet Until Told to Begin

Directions: Do not turn this page until the person conducting the test gives the signal to begin. This is a ten-minute test. There are 80 problems. Solve accurately and quickly as many as you can in the order in which they appear. ALL PROBLEMS ARE TO BE SOLVED MENTALLY. Make no calculations with paper and pencil. Write only the answer in the space provided at the end of each problem. Problems marked with a star (*) require only approximate answers; any answer to a starred problem that is within five per cent of the exact answer will be scored correct; all other problems require exact answers.

Person conducting contest should explain these directions carefully to the contestants.

Stop—Wait for Signal

(1) Fifteen per cent of 842 = ...

(2) The area of a triangle of base 14 inches and altitude 16½ inches is ..... sq. in.

(3) The sum of $28.68 and $41.26 is $.....

(4) The difference of $41.26 and $28.68 is $.....

(5) 7½% of $842.00 = ...

(6) 277+458—589= .....

(7) 15×74⅛= .....

(8) 306÷34= .....

(9) Fourteen per cent of 842 = ...

*(10) Estimate the cost of 6665 square feet of roofing at 13⅝¢ a square foot. $.....

(11) (68×41)—(51×54) = ...

(12) 175÷3⅛ = ...

(13) 32⅜—17⅝—9¾ = ...

(14) (29×29)—(19×19) = ...

(15) (27×28)—(26×29) = ...

(16) Find the altitude of a triangle of area 70 square inches and base 6⅔ inches. ..... in.

(17) Find the interest on $6800 for one year at 4⅛%. $.....

(18) How much should be invested for one year at 4⅛% in order to earn $66 in interest? $.....

(19) At what annual rate of interest should $8800 be invested to yield $616 in interest one year from now? .....%.

*(20) If 10 liters are equivalent to 2.64 gallons, estimate the cost of 17½ gallons of gasoline at 7½¢ a liter. $.....

(21) 6½×1½= .....

(22) 6½×2½= .....

(23) 6½×2½×1⅛= .....

(24) 6½×1½×1⅓= .....

(25) 9¾÷1½= .....

(26) Find the cost of 68 liters of gasoline at 8½¢ a liter. $.....

(27) Find the cost of 58 liters of gasoline at 8½¢ a liter. $.....

(28) Find the cost of 68 liters of gasoline at 6½¢ a liter. $.....

(29) Find the cost of 68 liters of gasoline at 8¼¢ a liter. $.....

*(30) If 100 lire are equivalent to 16¢, convert $57.60 into lire. ..... lire.

(31) Write in figures: fifteen and three-eighths billion.

.....

(32) Of 241 girls in a school, 158 play tennis and 166 play basketball. If 28 play neither, how many play both? .....

(33) How many play basketball only? .....

(34) How many play tennis only? .....

(35) How fast must you drive in order to cover 385 miles in 6 hours 25 minutes? ..... m.p.h.

(36) How long does it take to cover 306 miles at 48 miles an hour? ..... hrs.

(37) How far can you drive in 5 hours 35 minutes at 24 miles per hour? ..... mi.

(38) How far can you drive in 5 hours 55 minutes at 24 miles per hour? ..... mi.

(39) How fast must an airplane fly in order to cover 1540 miles in 6 hours 25 minutes? ..... m.p.h.

*(40) How long will it take a rocket traveling 14,630 feet a second to cover 264,000 miles? ..... hrs.

(41) 385÷6 5/12= .....

(42) 24×5 11/12= .....

(43) Trunk A holds 50% more than trunk B, and trunk B holds 20% more than trunk C. What per cent more does A hold than C? ..... %.

(44) What per cent less does B hold than A? .....%.

(45) The dimensions of rectangle A are 28×32 inches and of rectangle B 28×40 inches. The area of A is what per cent less than that of B? ..... %.

(46) The area of rectangle B is what per cent greater than that of rectangle A? ..... %.

(47) The perimeter of rectangle A is what per cent less than that of rectangle B? ..... %.

(48) The area of rectangle A is what per cent of that of rectangle B? ..... %.

(49) The perimeter of rectangle B is what per cent more than that of rectangle A? ..... %.

*(50) The circumference of a circle is increased from 13½ inches to 41 inches. Estimate the corresponding increase in the radius. ..... in.

(51) $8\times1\frac{1}{3}=$ .....

(52) $8\times1\frac{1}{3}\times1\frac{1}{8}=$ .....

(53) $8\frac{1}{3}\times1\frac{1}{5}=$ .....

(54) $2\frac{2}{5}\times4\ 1/6=$ .....

(55) $10\frac{2}{3}\div1\frac{1}{3}=$ .....

(56) $10\frac{2}{3}\div2\frac{2}{3}=$ .....

(57) $5\frac{1}{3}\div1\frac{1}{3}=$ .....

(58) $21\frac{1}{3}\div2\frac{2}{3}=$ .....

(59) $4\frac{4}{5}\times4\frac{1}{6}\times2\frac{3}{4}=$ .....

*(60) Estimate the number of revolutions of a wheel of diameter 30 inches in rolling 10 miles. .....

(61) If 640 pegs cost $32, find the cost per thousand. $.....

(62) If 320 pegs cost $16, find the cost per thousand. $.....

(63) If 640 pegs cost $36, find the cost per thousand. $.....

(64) If pegs cost $62.50 a thousand, find the cost of 640. $.....

(65) If pegs cost $56.25 a thousand, how many can you buy for $18? .....

(66) A pair of dice is rolled. Find the probability of rolling either a seven or eleven. .....

(67) Find the tax on twenty-four million gallons of gasoline at 8¾¢ a gallon. $.....

(68) If the tax on twenty-four million gallons of gasoline is $1,980,000, find the tax on one gallon. .....¢.

(69) How many gallons of gasoline must be taxed at 8¼¢ a gallon to yield $1,485,000 in revenue? ..... gals.

*(70) If a furlong is one-eighth of a mile, estimate the number of square yards in one-fifth of a square furlong. ..... sq. yds.

(71) $(34\times87)-(174\times17)=$ .....

(72) $(51\times58)-(17\times174)=$ .....

(73) The perimeter of a square is increased from 22½ inches to 34½ inches. Find the corresponding increase in the area. .....sq. in.

(74) The square root of 90.25 is .....

(75) The area of a square decreases from 90¼ square inches to 72¼ square inches. Find the corresponding decrease in the perimeter. .....in.

(76) The altitude of a right triangle is 4⅘ inches and the hypotenuse is 5 inches. Find the area. .....sq. in.

(77) A box contains 6 green balls and 5 red balls. Two balls are taken at random from the box. Find the probability that both are green. .....

(78) What is the probability that both balls are red? .....

(79) Two dice are tossed. Find the probability that 7, 9, or 11 will show. .....

*(80) Estimate the area of an equilateral triangle of perimeter 27 inches. .....sq. in.

The University of Texas Interscholastic League
Number Sense Test, Series V-8

Contestant's Number..... Contestant's Score.....

Read Directions Carefully Before Beginning Test

Do Not Unfold This Sheet Until Told to Begin

Directions: Do not turn this page until the person conducting the test gives the signal to begin. This is a ten-minute test. There are 80 problems. Solve accurately and quickly as many as you can in the order in which they appear. ALL PROBLEMS ARE TO BE SOLVED MENTALLY. Make no calculations with paper and pencil. Write only the answer in the space provided at the end of each problem. Problems marked with a star (*) require only approximate answers; any answer to a starred problem that is within five per cent of the exact answer will be scored correct; all other problems require exact answers.

Person conducting contest should explain these directions carefully to the contestants.

Stop—Wait for Signal

(1) $331 - 186 =$ .....

(2) $431 + 155 - 286 =$ .....

(3) $16 \times 23 =$ .....

(4) $32 \times 11\frac{1}{2} =$ .....

(5) $10 \times 48\frac{3}{8} =$ .....

(6) $13\frac{1}{2} \div 1\frac{1}{8} =$ .....

(7) $11\frac{1}{4} - 8\frac{3}{8} + 6\frac{5}{8} - 7\frac{7}{8} =$ .....

(8) $(37 \times 87) - (81 \times 29) =$ .....

(9) $11\frac{1}{9}$ is what per cent less than 14? .....%.

*(10) Estimate the revenue obtainable by taxing 665,800 pounds of tobacco at $66\frac{1}{2}$¢ a pound. $.....

(11) If 24 steaks weighing 6 ounces each sell for $30.60, find the equivalent selling price per pound. $.....

(12) Convert 6500 Mexican pesos into dollars at $12\frac{1}{2}$ pesos to the dollar. $.....

(13) $66\frac{2}{3} \div 33\frac{1}{3} =$ .....

(14) $(34\frac{1}{3})^2 - (14\frac{1}{3})^2 =$ .....

(15) If 10 liters are equivalent to 2.64 gallons, then 25 liters are equivalent to .....gals.

(16) 26 liters are equivalent to ..... gals.

(17) 5.28 gallons are equivalent to .....liters.

(18) If $12\frac{1}{2}$ pesos are equivalent to one dollar, find the cost in dollars of 25 liters of gasoline that sells for one peso per liter. $.....

(19) Find the cost in dollars of 5.28 gallons of gasoline that sells for one peso per liter. $.....

*(20) If a car travels 267 miles on 26 liters of gasoline, estimate the number of miles it travels per gallon. ..... mi.

(21) How far can you drive in 7 hours 40 minutes at 42 miles an hour? ..... mi.

(22) How long does it take to cover 544 miles at 64 miles an hour? ..... hrs.

(23) How fast must you drive in order to cover 312 miles in 8 hours 40 minutes? ..... m.p.h.

(24) How long does it take to cover 306 miles at 36 miles an hour? ..... hrs.

(25) How long does it take to cover 459 miles at 54 miles an hour? ..... hrs.

(26) At what speed must you drive in order to cover 408 miles in $8\frac{1}{2}$ hours? ..... m.p.h.

(27) Find the cost of 88 liters of gasoline at $8\frac{3}{4}$¢ a liter. $.....

(28) Find the cost of 68 liters of gasoline at $8\frac{3}{4}$¢ a liter. $.....

(29) How many liters of gasoline can be bought for $7.35 at $8\frac{3}{4}$¢ a liter? .....liters.

*(30) The take-home pay of an employee earning $1135 a month is $771.80. What per cent of his salary is withheld? .....%.

(31) If 84 liters of gasoline can be bought for $6.93, what is the price per liter? .....¢.

(32) Write in figures: fourteen and eleven-sixteenths million. .....

(33) Find the tax on 2 4/7 million gallons of gasoline at $10\frac{1}{2}$¢ a gallon. $.....

(34) If the tax on 2,220,000 gallons of gasoline is $244,200, find the tax on one gallon. ..... ¢.

(35) How many gallons of gasoline must be taxed at 11¢ a gallon to yield $366,300 in revenue? .....gals.

(36) $22\frac{1}{2} \div 4\frac{1}{2} =$ .....

(37) $2\ 4/7 \times 10\frac{1}{2} =$ .....

(38) $5\ 1/7 \times 5\frac{1}{4} =$ .....

(39) If 450 pegs cost $22.50, find the cost per thousand. $.....

*(40) If 643 pegs cost $50.39, estimate the cost per thousand. $.....

(41) $10\frac{1}{2}$ is what per cent of 35? .....%.

(42) $10\frac{1}{2}$ is what per cent less than 35? .....%.

(43) $1\frac{1}{2}$ is what per cent more than $1\frac{1}{8}$? .....%.

(44) Car A weights 10% more than car C; car B weighs 20% less than car C. What per cent more does A weigh than B? .....%.

(45) Of 411 boys in a school, 176 play football, 225 play tennis, and 57 play neither. How many play both football and tennis? .....

(46) How many play tennis only? .....

(47) How many of those who play do not play tennis? .....

(48) If 100 Italian lire are equivalent to 16¢ and one British pound is equivalent to $2.80, convert 14,000 lire into pounds. ..... pounds.

(49) Convert 7 pounds into lire. .....lire.

*(50) Estimate the circumference of a circle of area 5 1/11 square inches. .....in.

(51) $(43\times31)-(42\times21\frac{1}{2})=$ .....

(52) $(68\times38\frac{1}{2})-(102\times21\frac{1}{8})=$ .....

(53) 8 is to 35 as $25\frac{3}{5}$ is to .....

(54) Subtract $13.77 from $31.15. $.....

(55) Subtract the sum of $8.83 and $4.94 from $31.13. $.....

(56) Subtract $13.78 from the sum of $14.96 and $16.16. $.....

(57) Subtract the sum of $7.86 and $5.95 from the sum of $18.43 and $12.67. $.....

(58) $6\frac{2}{3}\times1\frac{1}{3}\times4\frac{1}{2}=$ .....

(59) $1\frac{1}{5}\times6\frac{2}{3}\times1\frac{1}{2}=$ .....

*(60) If a trip which is usually made in $13\frac{1}{2}$ hours is made at a speed 32% slower than usual, how long will the trip take? .....hrs.

(61) If a trip which is usually made in 10 hours is made at a speed 25% faster than usual, how long will the trip take? .....hrs.

(62) If two dice are tossed, what is the probability that 8, 10, or 12 shows? .....

(63) If two dice are tossed, what is the probability that 2, 4, or 6 shows? .....

(64) A projectile traveling 1760 feet a second is moving how many miles an hour? .....m.p.h.

(65) A car traveling $52\frac{1}{2}$ miles an hour is moving how many feet a second? .....ft.

(66) How long will it take a car traveling 70.4 feet a second to cover 384 miles? .....hrs.

(67) How long will it take a car traveling 75 miles an hour to cover 11,000 feet? .....secs.

(68) Find the area of a trapezoid of altitude 23 inches and bases 17 inches and 25 inches. .....sq. in.

(69) Find the upper base of a trapezoid of area 396 square inches, altitude 18 inches, and lower base 23 inches. .....in.

*(70) Estimate the area of a triangle each of whose sides is 14 inches in length. .....sq. in.

(71) The base of a right triangle is 1 inch and the area is $1\frac{1}{8}$ square inches. Find the hypotenuse. .....in.

(72) $9^3-7^3=$ .....

(73) The perimeter of a square is increased from $31\frac{1}{2}$ inches to $39\frac{1}{2}$ inches. Find the corresponding increase in the area. ..... sq. in.

(74) Two cards are taken at random from an ordinary deck of 52 playing cards. Find the probability that both are spades. .....

(75) Find the square root of $132\frac{1}{4}$. .....

(76) The area of a square is increased from $72\frac{1}{4}$ square inches to $132\frac{1}{4}$ square inches. Find the corresponding increase in the perimeter. .....sq. in.

(77) What is the sixth term of the sequence $9\frac{1}{8}$, $10\frac{5}{8}$, $12\frac{1}{8}$, $13\frac{5}{8}$, . . . ? .....

(78) If the area of a square is the same number of square inches that the perimeter is of linear inches, find the length of a side. ..... in.

(79) $\sqrt{42^2+56^2}=$ .....

*(80) Estimate the number of revolutions of a wheel of diameter 15 inches in rolling 6 miles. .....