

Math Meet

7th & 8th Grade Screening Tests

Keep these test masters in a safe place
and the **answer keys** safely hidden!!

New screening tests are **NOT** created
each year. Have students write on the
score sheets so that you can reuse the
screening tests each year.

We recommend screening tests be copied back to back to conserve paper!

Districts may decide how to administer screening tests and how to choose teams. Options include:

- * Have all students in both grades take the screening test.
- * Have teachers select the top students to take the screening test.
- * Use other testing measures (WKCE, MATS, etc.) to choose high students.

However – there must be four students from each grade on the team and both genders must be represented!!!

Teams may be formed at any time during the year and teams may practice together prior to the Math Meet.

The Mental Math section is administered as follows:

Students have pencils down. Transparency or large written problem is show for 15 seconds then removed. Students then have 10 seconds to solve problem. Repeat for all 10 problems.

7th GRADE MATH SCREENER

Student Name: _____ Teacher's Name _____

1. _____ is the mean. Express as a mixed number.
2. _____ is the value.
3. _____ is the probability.
4. _____ is the common fraction.
5. _____ is the amount that Misha contributed.
6. _____ is the 10th number in the arithmetic sequence.
7. _____ is the average.
8. _____ is the perimeter of the figure.
9. _____ is the value of N .
10. _____ is the value.
11. $x =$ _____
12. The tree is _____ tall. (Label your answer.)
13. _____ and _____ are the next pair of primes.
14. _____ is the product.
15. _____ is the product.

MENTAL MATH

1. _____ 6. _____
2. _____ 7. _____
3. _____ 8. _____
4. _____ 9. _____
5. _____ 10. _____

7th GRADE MATH SCREENER

Student Name: Key Teacher's Name _____

1. $16\frac{4}{7}$ is the mean. Express as a mixed number.
2. 91 is the value.
3. $\frac{100}{319}$ is the probability.
4. $\frac{5}{14}$ is the common fraction.
5. \$150 is the amount that Misha contributed.
6. 35 is the 10th number in the arithmetic sequence.
7. 19 is the average.
8. 72 is the perimeter of the figure.
9. 40 is the value of N.
10. 18 is the value.
11. $x =$ 4
12. The tree is 80ft. tall. (Label your answer.)
13. 29 and 31 are the next pair of primes.
14. -1 is the product.
15. $\frac{1}{84}$ is the product.

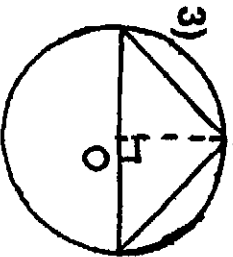
MENTAL MATH

1. 25
2. 81
3. $\frac{\pi d^2}{4}$
4. 3
5. 8
6. 98
7. 10
8. 7
9. 9
10. 12

MATH SCREENER PART II

1) What is the mean of the first seven COMPOSITE numbers greater than 10? Express your answer as a MIXED NUMBER.

2) Given that $a \otimes b = b^a + ab$ for all integers a and b , what is the value of $6 \otimes 7$?



If the diameter of circle O is 20cm, then what is the probability of a dart, that hits the target, landing in the triangular region?

4) What common fraction has a reciprocal of 2.8?

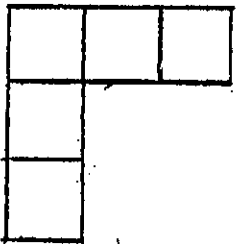
5) Misha and Joy have a piggy bank to which Misha contributed \$3 for every \$2 contributed by Joy. If they have saved a total of \$250, then how much did Misha contribute?

6) What is the 10th number in the arithmetic sequence $-1, 3, X, 11, \dots$?

7) The average of 4 numbers is 20. What is the average of these same 4 numbers and 15?

8)

The area of each of the 5 squares in the given figure is the same and their total area is 180 units squared. What is the perimeter of this figure?

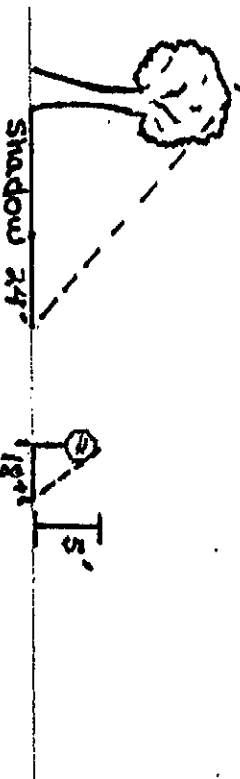


9) If 20% of 60 = 30% of N, then find the value of N.

10) If $a * b$ means $(a+b) / 2$, then find the value of $(9 * 15) * 24$.

11) $3^3 + 3^3 + 3^3 = 3^x$, Find x.

12)



How tall is the tree?

13) Two consecutive odd primes are called twin primes. 17 and 19 are twin primes. What is the next pair of twin primes?

14) $-1^9 \times 7^0 = ?$

15) 5! means $1 \times 2 \times 3 \times 4 \times 5$.

Solve $\frac{6! \times 3!}{9!} =$

Now check over your work. Make sure you have labels where they are needed. Put fractions in lowest terms.

MATH 7 SCREENER

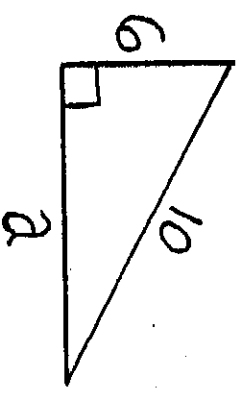
1) IF THE SUM OF TWO NUMBERS IS 10, THEN AT MOST THEIR PRODUCT IS?

2) IF THE PERIMETER OF A SQUARE IS 36, THEN THE AREA OF THIS FIGURE IS ____ ?

3) IF THE LENGTH OF THE DIAMETER OF A CIRCLE IS D , THEN WHAT IS THE AREA OF THE CIRCLE?

4) OF THE NUMBERS 1, 11, 21, 31, 41, AND 51, HOW MANY OF THESE ARE PRIME?

5) IN THE TRIANGLE BELOW, FIND THE LENGTH OF SIDE a .



6) MEGAN'S GOAL IS TO AVERAGE 90% ON HER 4 MATH TESTS. HER SCORES SO FAR ARE 86, 82, AND 94. WHAT DOES SHE NEED ON THE LAST TEST TO REACH HER GOAL?

**7) WHAT NUMBER IS
125% OF EIGHT?**

**8) WHAT IS THE
GREATEST COMMON
FACTOR OF 14 AND 63?**

9) WHAT IS 15% OF 60?

**10) 18 IS 150% OF WHAT
NUMBER?**

8TH GRADE MATH SCREENER

Student Name: _____ Teacher's Name _____

1. _____ is the 7th number in this pattern.
2. _____ is the ratio.
3. _____ is the probability.
4. _____ hours.
5. The people could be seated _____ different ways.
6. _____ quarters and _____ dimes.
7. _____ cm are in the length of the rectangle.
8. _____ was the original price.
9. _____ is the sum.
10. _____ is the sum.
11. _____ will be boys.
12. _____ is the answer. (Label your answer.)
13. The tree is _____ feet high.
14. _____ is the product.
15. It costs _____ to create the driveway. (Label your answer.)

MENTAL MATH

1. _____ 6. _____
2. _____ 7. _____
3. _____ 8. _____
4. _____ 9. _____
5. _____ 10. _____

8TH GRADE MATH SCREENER

Student Name: Key Teacher's Name _____

1. 28 is the 7th number in this pattern.
2. $\frac{5}{8}$ is the ratio.
3. $\frac{1}{221}$ is the probability.
4. 2 hours.
5. The people could be seated 120 different ways.
6. 13 quarters and 8 dimes.
7. 8 cm are in the length of the rectangle.
8. \$380.⁰⁰ was the original price.
9. 5 is the sum.
10. $\frac{135}{216}$ is the sum.
11. $\frac{1}{2}$ will be boys.
12. \$162.⁰⁰ is the answer. (Label your answer.)
13. The tree is 80' feet high.
14. 625 is the product.
15. It costs \$540.⁰⁰ to create the driveway. (Label your answer.)

MENTAL MATH

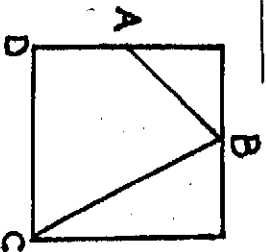
1. 135°
2. 0
3. 6 (\$10.⁰⁰ - .02)
4. .54
5. 65°
6. 2³ · 3 · 5
7. 24 mins.
8. $\frac{1}{20}$
9. 12.5
10. Supp. 110°, comp. 20°

MATH 8 SCREENER PART II

ANS.

- 1) _____ Name the 7th number in this pattern.
1, 3, x, 10, 15,...

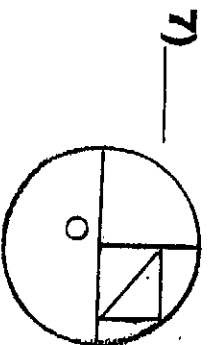
2) _____



If A & B are midpoints of the square, then what is the ratio of the area of quadrilateral ABCD to the area of the square?

- 3) _____ What is the probability of being dealt a pair of 7's from a full deck of playing cards?
- 4) _____ How many hours will it take a car traveling 45 MPH to catch up with a car traveling 30 MPH if the slower car has a one hour head start?
- 5) _____ There are 5 people seated in a row. How many different ways could they be seated?
- 6) Q, D, _____ Leah has \$4.05 in dimes and quarters. If she has 5 more quarters than dimes, then how many of each coin does she have?

Math 8 screener



The radius of circle O is 8 cm. How many cm are in the length of the diagonal of the rectangle?

8) _____ After a 25% reduction, a bike sold for \$285. What was was the original price?

9) _____ If $(-3,7)$ & $(8,-2)$ are the endpoints of a segment, then what is the sum of the coordinates of the segment's midpoint?

10) _____ Solve: $(1/2 + 1/3)^3$ Express as a common fraction.

11) _____ In a class of 30 students, $2/5$ are boys. If 6 more boys are added, then what fraction of the class will be boys?

12) _____ A man spent $2/3$ of his money and then lost $2/3$ of the remainder, which left him with \$18.00. How much did he start with?

13) _____ At 2:00 PM a tree casts a shadow of 24 ft., while a signpost nearby has an 18 in. shadow. If the signpost is 5 ft. high, then how high is the tree?

14) _____ $(5^a \times 8^b)^a = B$. Find B.

15) _____ If concrete sells for \$27.00 / cu. yd., then what does it cost for a driveway that is 30' by 12' by 6" ?
(THINK... HOW MANY CU. FT. = 1 CU. YD.?)

MATH 8 SCREENER
MENTAL MATH

1)

FIND THE MEASURE OF $\angle X$.



2)

$$(25 - 16) - 3^3 =$$

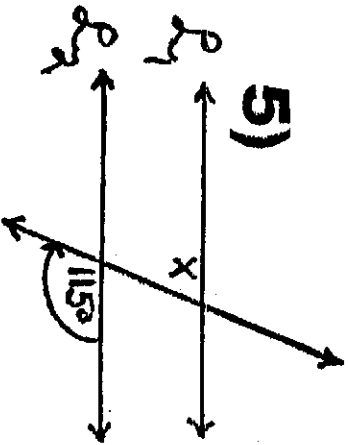
$$81 \times 2.4$$

3)

JOE BOUGHT 6 CD'S ON SALE FOR \$9.98 EACH. WRITE AN EXPRESSION USING THE DISTRIBUTIVE PROPERTY TO SOLVE THIS PROBLEM.

4)

EXPRESS $1/2 + 1/25$ AS A DECIMAL NUMBER.

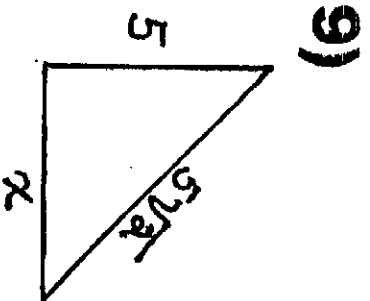


5) IF l_1 AND l_2 ARE PARALLEL, THEN FIND THE MEASURE OF x .

6) EXPRESS THE PRIME FACTORIZATION OF 120 USING EXPONENTS.

7) IF A PERSON CAN WALK $\frac{3}{4}$ OF A MILE IN 18 MINUTES, THEN HOW LONG WILL IT TAKE TO WALK A FULL MILE?

8) FIND THE RATIO OF 15 CM TO 3 METERS.



**FIND THE AREA OF
THIS TRIANGLE.**

10)

**IF AN ANGLE MEASURES
70 DEGREES, THEN FIND
IT'S COMPLEMENT AND
IT'S SUPPLEMENT. (BE SURE
TO LABEL EACH ANSWER).**