**MATH PRACTICE TEST for TAB WORK**

Use a calculator for the following problems:

## Addition

**1** $6,843 + 4,287 + 9,182 + 5,817 + 6,454 =$

**2** $8,974 + 465 + 817 + 6,292 + 9,818 + 576 + 639 =$

**3** $3,286 + 989 + 82,164 + 87 + 412 + 9,678 + 824 =$

## Subtraction

**4** $5,304 - 2,675 =$

**5** $5,376 - 1,849 =$

**6** $5,980 - 98 =$

## Multiplication

**7** $645 \times 34 =$

**8** $5,376 \times 752 =$

**9** $102 \times 3 \times 16 =$

## Division

**10** $32,832 \div 64 =$

**11** $32,736 \div 624 =$

**12** $645,424 \div 856 =$

## Squares of Numbers

**13** $8^2 =$

**14** $123^2 =$

**15** $364^2 =$

## Square Roots of Numbers

**16** $\sqrt{36} =$

**17** $\sqrt{625} =$

**18** $\sqrt{1521} =$

## Cubes of Numbers

**19** $14^3 =$

**20** $24^3 =$

**21** $96^3 =$

## Cube Roots of Numbers

**22** $\sqrt[3]{125} =$

**23** $\sqrt[3]{2197} =$

**24** $\sqrt[3]{68921} =$

## Decimals and Fractions

Convert the fraction to a decimal (to three decimal places).

**25** $3/16 =$

**26** $3/8 =$

**27** $3\ 11/16 =$

Convert the decimal to a fraction (to the nearest sixteenth).

**28** $2.789 =$

**29** $1.349 =$

**30** $0.479 =$

## Decimals and Percentages

Convert the decimals to a Percentage.

**31** $0.005 =$

**32** $0.045 =$

**33** $2.5 =$

Convert the Percentage to a decimal (to three places).

**34** $12\ 1/2\% =$

**35** $6\ 1/4\% =$

**36** $16\frac{2}{3}\% =$

## Averaging Numbers

**37** Find the average of the following:
327 642 897 263

**38** Find the average of the following:
587 421 659 430 798 321

## Ratios

Express as a ratio and a percent (to one decimal place).

EXAMPLE:

$$300{:}400 = \frac{300}{400} = 75\%$$

**39** 525:730

**40** 410:560

**41** 705:650

## Proportions

In the following proportions, solve for the unknown value (to two decimal places).

**42** $\frac{X}{600} = \frac{350}{400}$

**43** $\frac{X}{945} = \frac{0.6}{0.5}$

**44** $\frac{X}{1.3} = \left(\frac{100}{120}\right)^2$

## Solving Equations

Give the answers to the following problems to two decimal places.

**45** $10,500 \times \frac{785}{643} =$

**46** $\frac{150 \times 45}{3,060 \times 0.78} =$

**47** $4,400\sqrt{0.4} =$

**48** $5.6 \times \left( \frac{10.5}{9.8} \right)^3 =$

**49** $\frac{6.8 \times 1740}{18.4} =$

## Transforming Equations

Change the equation to solve for the unknown specified.
EXAMPLE:

$$A = W \times H$$

$$W =$$

*Answer:* $W = \frac{A}{H}$

**50** $TS = RPM \times Circumference$

$RPM =$

**51** $\frac{SP_2}{SP_1} = \left( \frac{RPM_2}{RPM_1} \right)^2$

$SP_2 =$

**52** $\frac{PD_2}{PD_1} = \left( \frac{GPM_2}{GPM_1} \right)^2$

$GPM_2 =$

**53** $CFM_2 = CFM_1 \times \frac{RPM_2}{RPM_1}$

$RPM_2 =$

**54** $BHP_2 = BHP_1 \times \left( \frac{RPM_2}{RPM_1} \right)^3$

$RPM_2 =$

## Finding Areas

Find the area in **square feet** to two decimal places.

**55** A rectangle whose dimensions are 36” x 18” = _____sq. ft.

**56** A rectangle whose dimensions are 2’-8” x 1’-3”=_____sq. ft.

**57** A circle whose diameter is 18”=_____sq. ft.

**58** A circle whose radius is 4”=_____sq. ft.

**59** A circle whose circumference is 2’-10$\frac{9}{16}$”=_____sq. ft.

## Finding Volumes

Find the volume in **cubic feet** to two decimal places.

**60** 7’-0” x 4’-0” x 5’-0”=_____cu.ft

**61** 9’-0” x 3’-0” x 6’-5”=_____cu. ft.

**62** Cylinder: 18” radius x 6’-6” long =_____ cu.ft.

**63** Cylinder: 3’-6” diameter x 3’-0” long =_____ cu. ft.

# MATH PRACTICE TEST for TAB WORK
## Answer Section

### NUMERIC RESPONSE

1. ANS: 32,583
2. ANS: 27,581
3. ANS: 97,440
4. ANS: 2,629
5. ANS: 3,527
6. ANS: 5,882
7. ANS: 21,930
8. ANS: 4,020,192
9. ANS: 4,896
10. ANS: 513
11. ANS: 124
12. ANS: 754
13. ANS: 64
14. ANS: 15,129
15. ANS: 132,496
16. ANS: 6
17. ANS: 25
18. ANS: 39
19. ANS: 2,744
20. ANS: 13,824
21. ANS: 884,736
22. ANS:

5

**23** ANS:
13

**24** ANS:
41

**25** ANS:
0.188

**26** ANS:
.375

**27** ANS:
3.688

**28** ANS:
$2\frac{13}{16}$

**29** ANS:
$1\frac{3}{8}$

**30** ANS:
$\frac{1}{2}$

**31** ANS:
.5%

**32** ANS:
4.5%

**33** ANS:
250%

**34** ANS:
0.125

**35** ANS:
0.063

**36** ANS:
0.167

**37** ANS:
532.25

**38** ANS:
536

**39** ANS:
$\frac{525}{730} = 71.9\%$

**40** ANS:
$\frac{410}{560} = 73.2\%$

**41** ANS:
$\frac{705}{620} = 108.5\%$

**42** ANS:
525

**43** ANS:

1,134

**44** ANS:
0.90

**45** ANS:
12,818.82

**46** ANS:
2.83

**47** ANS:
2,782.8

**48** ANS:
6.89

**49** ANS:
643.04

**50** ANS:

$$RPM = \frac{TS}{Circumference}$$

**51** ANS:

$$SP_2 = SP_1 \times \left( \frac{RPM_2}{RPM_1} \right)^2$$

**52** ANS:

$$GPM_2 = GPM_1 \times \sqrt{\frac{PD_2}{PD_1}}$$

**53** ANS:

$$RPM_2 = RPM_1 \times \frac{CFM_2}{CFM_2}$$

**54** ANS:

$$RPM_2 = RPM_1 \times \sqrt[3]{\frac{BHP_2}{BHP_1}}$$

**55** ANS:
4.5 sq. ft.

**56** ANS:
3.33 sq. ft.

**57** ANS:
1.77 sq. ft.

**58** ANS:
0.35 sq. ft.

**59** ANS:
.66 sq. ft.

**60** ANS:
140 cu. ft.

**61** ANS:
173.25 cu. ft.

**62** ANS:
45.95 cu. ft.

**63** ANS:
28.86 cu. ft