

**FINAL
REVIEW PROBLEMS
for
DMAT 0090 LAB**

1. Write the **expanded notation** for 5673.

- A) 5 thousands + 6 hundreds + 7 tens + 3 ones B) 5673
C) five thousand, six hundred seventy-three D) 0.5673

2. Add.

$$\begin{array}{r} 486 \\ + 263 \\ \hline \end{array}$$

- A) 223 B) 649 C) 74.9 D) 749

3. Add: $3648 + 5278 + 6359 + 2345$

- A) 15285 B) 17630 C) 176.30 D) 1.7630

4. Find the sum and simplify, if possible:

$$\frac{6}{12} + \frac{3}{12}$$

- A) $\frac{3}{8}$ B) $\frac{9}{24}$ C) $\frac{3}{4}$ D) $\frac{18}{24}$

5. Add and simplify, if possible:

$$\begin{array}{r} 2\frac{5}{8} \\ + 3\frac{1}{4} \\ \hline \end{array}$$

- A) $5\frac{7}{8}$ B) $5\frac{1}{2}$ C) $6\frac{1}{2}$ D) 6

6. Add: $22.4 + 6.876 + 0.23$
- A) 2.9506 B) 295.06 C) 29.506 D) 29506

7. Subtract:
- $$\begin{array}{r} 3865 \\ - 2437 \\ \hline \end{array}$$
- A) 1432 B) 6302 C) 0.1428 D) 1428

8. Subtract and simplify, if possible:

$$\frac{7}{8} - \frac{2}{5}$$

- A) $\frac{5}{3}$ B) $\frac{19}{40}$ C) $\frac{14}{40}$ D) $\frac{9}{13}$

9. Subtract: $26.376 - 5.283$
- A) 21.093 B) 31.659 C) 21093 D) 21.193

10. Multiply: $\begin{array}{r} 276 \\ \times 145 \\ \hline \end{array}$
- A) 131 B) 421 C) 40020 D) 5244

11. Multiply and simplify, if possible:

$$\frac{11}{24} \cdot \frac{3}{5}$$

- A) $\frac{55}{72}$ B) $\frac{33}{120}$ C) $\frac{11}{40}$ D) $\frac{14}{29}$

12. Multiply and simplify, if possible:

$$2\frac{1}{4} \cdot 3\frac{2}{5}$$

A) $6\frac{1}{10}$

B) $7\frac{13}{20}$

C) $6\frac{5}{8}$

D) $\frac{45}{68}$

13. Divide: $7\overline{)4011}$

A) 0.573

B) 57.3

C) 5.73

D) 573

14. Divide and simplify, if possible:

$$\frac{10}{9} \div \frac{2}{3}$$

A) $\frac{5}{3}$

B) $\frac{30}{18}$

C) $\frac{20}{27}$

D) $\frac{3}{5}$

15. Divide: $\frac{16}{0}$

A) 16

B) 0

C) not defined

D) 1

16. Which of the following is a true statement?

A) $0 > 17$

B) $52.345 < 52.35$

C) $133 < 132$

D) $\frac{1}{2} > \frac{3}{4}$

17. Write a multiplication that represents the following situation: A rectangular play area is 22 feet long and 13 feet wide. Find its area.

A) $(2 \times 22) + (2 \times 13)$ sq. ft.

B) $2 \times (22 + 13)$ sq. ft.

C) 22×13 sq. ft.

D) $\frac{1}{2} \times 22 \times 13$ sq. ft.

18. Solve: $375 + x = 486$
- A) 861 B) -111 C) none of these D) 111
19. Solve: $9 \cdot t = 1269$
- A) 141 B) 11421 C) none of these D) 1260
20. Your Neighborhood College is constructing new dorms that will house 64 rooms. Each room has a small kitchen, which will have a microwave oven. If the microwave ovens cost \$128 each find the **total cost** of the purchase.
- A) \$192 B) none of these C) \$8192 D) \$1280
21. Write the **exponential notation** for $2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2$.
- A) 7^2 B) 128 C) 2^7 D) none of these
22. Evaluate 2^7 .
- A) 128 B) 14 C) $7 \cdot 7$ D) 49
23. Simplify: $4 \cdot 16 + 64$
- A) 84 B) 320 C) 80 D) 128
24. Simplify: $3 \cdot (2 + 8)^2 - 5 \cdot (4 - 3)^2$
- A) 59 B) 295 C) 169 D) none of these
25. Find the **prime factorization** of 128.
- A) $64 \cdot 2$ B) $8 \cdot 8 \cdot 2$ C) $4 \cdot 32$ D) $2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2$

26. What part of the object is shaded?



- A) $\frac{6}{9}$ B) $\frac{2}{3}$ C) $\frac{1}{3}$ D) none of these

27. Solve and simplify, if possible: $y + \frac{9}{12} = \frac{11}{12}$

- A) $\frac{1}{6}$ B) not defined C) $\frac{5}{3}$ D) $\frac{20}{12}$

28. Convert $3\frac{4}{5}$ to **fraction notation**.

- A) $\frac{23}{5}$ B) $\frac{17}{5}$ C) $\frac{15}{5}$ D) $\frac{19}{5}$

29. Convert to a **mixed numeral**: $\frac{39}{8}$

- A) none of these B) 5 C) 4.875 D) $4\frac{7}{8}$

30. Calculate: $5 \cdot 3\frac{3}{4}$

- A) $8\frac{3}{4}$ B) $18\frac{3}{4}$ C) none of these D) $15\frac{3}{4}$

31. Convert to **decimal notation**: $\frac{7}{28}$

- A) 4.0 B) none of these C) 0.25 D) $\frac{1}{4}$

32. What is the cost, in dollars, of 15.3 gal of gasoline at \$1.79 per gallon? Round your answer to the nearest cent.

- A) \$27.39 B) \$27.40 C) \$27.00 D) none of these

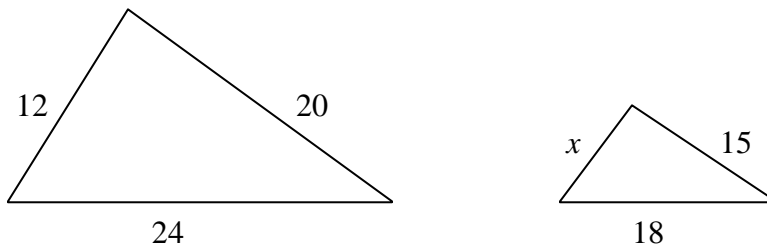
33. Solve: $\frac{8}{x} = \frac{5}{3}$

- A) 1.875 B) 4.8 C) $13.\bar{3}$ D) 24

34. A 2001 BMW Z3 Roadster can travel 365 miles on 13.5 gal of gasoline. At this rate, how far could it travel on 7 gal. Round your answer to the nearest mile.

- A) 189 miles B) 200 miles C) none of these D) 2555 miles

35. This pair of triangles is similar. Find the missing length, x .



- A) 25 B) none of these C) 16 D) 9

36. Find the **percent notation**: $\frac{6}{20}$

- A) 300% B) 0.30% C) 3.33% D) 30%

37. Find the **fractional notation**: 62.5%

- A) 0.625 B) none of these C) $\frac{5}{8}$ D) $\frac{25}{4}$

38. What is 40% of 60?

- A) 2400 B) 24 C) 1.5 D) 240

39. 20% of what is 45?
 A) 36 B) 9.2 C) 225 D) \$9.20
40. What is the **simple interest** on \$1800 invested at an interest rate of 7% for 1 year?
 A) \$14400 B) \$126 C) \$1926 D) \$1260
41. The heights for 5 basketball players (in meters) are listed below. What is their **average** height? Round to the nearest hundredths.

2.08m, 2.21m, 2.26m, 2.11m, 2.31m

- A) 2.20m B) 2.196m C) 2.19m D) 2.0m
42. Consider the following set of numbers. 5, 37, 35, 20, 5, 20, 25
 Find a) the average, b) the median, and c) any modes that exist.
- A) Average: 21 Median: 20 Mode(s): no mode exists
 B) Average: 20 Median: 21 Mode(s): 5, 20
 C) Average: 20 Median: 20 Mode(s): 5
 D) Average: 21 Median: 20 Mode(s): 5, 20

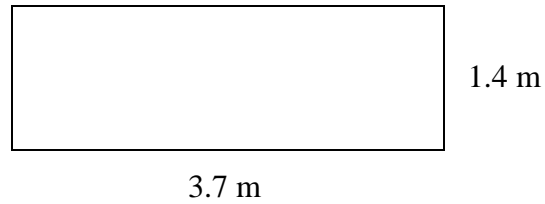
43. The table lists nutrition information for a 1-cup serving of four (4) cereals (it does not consider the use of milk, sugar, or sweetener).

Cereal	Calories	Fat (in grams)	Total Carbohydrates (in grams)	Sodium (in milligrams)
Life	160	2.0	33.3	213.3
Lucky Charms	120	1.0	25.0	210
Kellogg's	120	0.7	30.7	280
Wheaties	110	1.0	24.0	220

Find the **average calories** in the cereals listed above.

- A) 1.175 grams B) 28.25 C) 230.825 D) 127.5

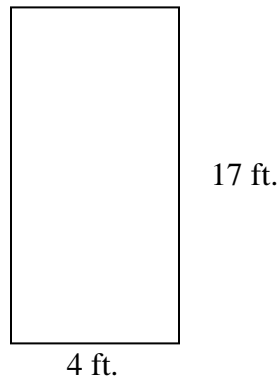
44. Find the **perimeter** of the rectangle shown.



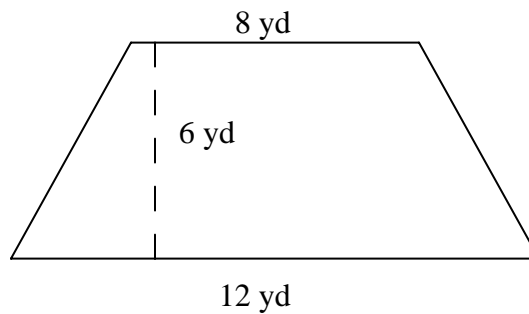
- A) 5.18 sq. m. B) 5.1 m C) 10.2 m D) 26.8324 m
45. Find the **perimeter** of a square whose sides are $5\frac{1}{4}$ in. long.

- A) 21 in. B) 10.5 in. C) $\frac{21}{4}$ in. D) $20\frac{1}{4}$ in.

46. Find the **area** of the following polygon.

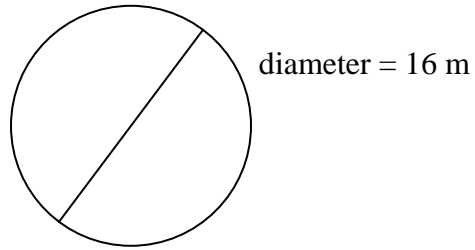


- A) 68 sq. ft. B) 21 sq. ft. C) 42 ft. D) 42 sq. ft.
47. Find the **area** of the trapezoid shown.

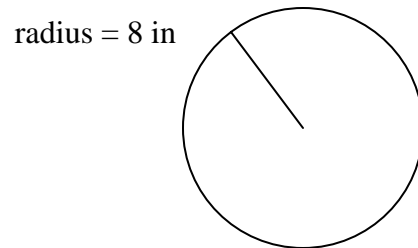


- A) 26 sq. yd. B) 60 sq. yd. C) 576 sq. yd. D) 72 sq. yd.

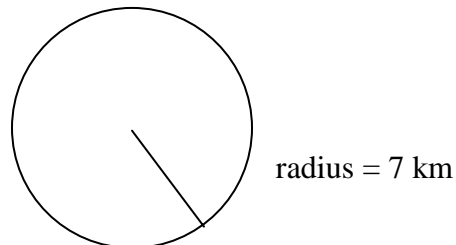
48. Find the **radius** of a circle whose diameter is 16 m.



- A) π B) 16π m C) 8 m D) 803.84 m
49. Find the **circumference** of a circle whose radius is 8 in. (use 3.14 for π)

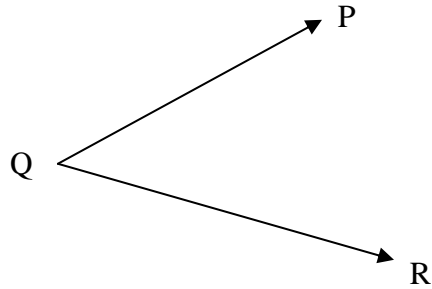


- A) 50.24 in. B) 200.96 in. C) 100.48 in. D) 16 in.
50. Find the **area** of a circle whose radius is 7 km. (use 3.14 for π)



- A) 21.98 sq. km. B) 153.86 sq. km. C) 43.96 sq. km. D) 7π

51. Name the angle PQR.



- A) obtuse B) acute C) straight D) right

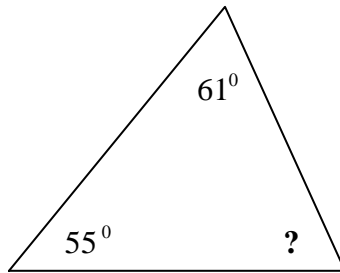
52. Find the measure of the **complement** of the angle 37° .

- A) 37° B) 73° C) 53° D) 143°

53. Find the measure of the **supplement** of the angle 37° .

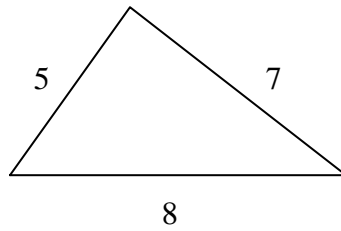
- A) 37° B) 73° C) 53° D) 143°

54. Find the missing angle measure.



- A) 64° B) 35° C) 116° D) 119°

55. Classify the triangle as equilateral, isosceles, or scalene. Then classify it as right, obtuse, or acute.



- A) Equilateral; obtuse
B) Scalene; acute
C) Scalene; right
D) Isosceles; right
56. What is the **absolute value** of $|-2.486|$?
- A) -2.486 B) 0 C) none of these D) 2.486
57. Make the following math sentence TRUE: $-25 + \boxed{} = 0$
- A) 0 B) -25 C) 25 D) 50
58. What is the additive inverse (opposite) of 16?
- A) -16 B) $\frac{1}{16}$ C) 0 D) 61
59. Add: $53 + (-15)$
- A) 38 B) 68 C) -68 D) 53
60. Add: $-49 + 19$
- A) 19 B) -68 C) 68 D) -30

61. Simplify: $28 + (-44) + 17 + 31 + (-94)$
- A) 214 B) 76 C) -62 D) none of these
62. Subtract: $0 - 15$
- A) $\frac{1}{15}$ B) 15 C) -15 D) 0
63. Subtract: $2.357 - (-7.643)$
- A) -5.286 B) 10 C) 2.357 D) none of these
64. Simplify: $22 - (-18) + 7 + (-42) - 27$
- A) -22 B) 29 C) 116 D) 47
65. Multiply: $-5 \cdot (-6) \cdot (-3)$
- A) 14 B) -14 C) 90 D) -90
66. Divide if possible: $\frac{-50}{25}$
- A) -2 B) 2 C) 20 D) -0.2

67. What is the multiplicative inverse (reciprocal) of $-\frac{7}{5}$?

A) $\frac{7}{5}$

B) $\frac{5}{7}$

C) $-\frac{5}{7}$

D) -12

68. Divide: $-\frac{3}{8} \div \left(-\frac{8}{3}\right)$

A) $\frac{9}{64}$

B) -1

C) 1

D) $\frac{64}{9}$

69. Simplify: $10 \cdot 20 - 15 \cdot 24$

A) none of these

B) -160

C) 560

D) 1200

70. Simplify: $\frac{10 - 6^2}{9^2 + 3^2}$

A) $\frac{6}{80}$

B) $-\frac{26}{144}$

C) none of these

D) $-\frac{13}{45}$

ANSWER KEY
REVIEW PROBLEMS
DMAT 0090 LAB FINAL

1.	A	21.	C	41.	C	61.	C
2.	D	22.	A	42.	D	62.	C
3.	B	23.	D	43.	D	63.	B
4.	C	24.	B	44.	C	64.	A
5.	A	25.	D	45.	A	65.	D
6.	C	26.	C	46.	A	66.	A
7.	D	27.	A	47.	B	67.	C
8.	B	28.	D	48.	C	68.	A
9.	A	29.	D	49.	A	69.	B
10.	C	30.	B	50.	B	70.	D
11.	C	31.	C	51.	B		
12.	B	32.	A	52.	C		
13.	D	33.	B	53.	D		
14.	A	34.	A	54.	A		
15.	C	35.	D	55.	B		
16.	B	36.	D	56.	D		
17.	C	37.	C	57.	C		
18.	D	38.	B	58.	A		
19.	A	39.	C	59.	A		
20.	C	40.	B	60.	D		