DSPM 0800 Test 2 Review

Solve the equation.

1) $b - 8 = 4$

2) $8p - 12 = 7p + 1$

3) $0.200x - 6 = 1.200x$

4) $-5a + 4 + 6a = 8 - 23$

5) $5(y + 8) = 6(y - 5)$

6) $-\frac{3}{7}p = -\frac{1}{6}$

7) $18x - 9x + 7x = 32$

8) $7n - 10 = 18$

9) $6(x + 4) = (6x + 24)$

10) $4(x + 4) = (4x + 23)$

11) $0.8x - 0.4(20 + x) = 0.4(20)$

12) $\frac{1}{2}(6x - 10) = \frac{1}{5}(25x - 15)$

13) $-(5y + 7) - (-4y + 6) = 7$

Translate the sentence into an equation using the variable x. DO NOT SOLVE.

14) Three times a number equals six less than four times the number.

15) If six times a number is subtracted from seven times the number, the result is nine.

Solve the problem.

16) One half of a number is 3 more than one-sixth the same number. What is the number?

17) When a number is divided by 4, the result is -6. What is the number?

18) A high school graduating class is made up of 456 students. There are 88 more girls than boys. How many boys are in the class?

19) The sum of the measures of the angles in any triangle is 180 degrees. In triangle ABC, angles A and B have the same measure, while angle C is 144 degrees larger than each of the other two angles. Find the measure of angle C.

20) Which of the following would not be a reasonable answer in an applied problem that requires finding the number of cars parked in a parking lot?

(i) -12 (ii) 64 (iii) 46 (iv) 5

A formula is given along with the values of all but one of the variables in the formula. Find the value of the variable not given. If necessary, round the answer to the nearest hundreth.

21) $V = \frac{4}{3}\pi r^3$; $r = 2$, $\pi = 3.14$

22) $A = \frac{1}{2}(b + B)h$; $A = 128$, $b = 12$, $B = 20$

Solve the formula for the specified variable.

23) $A = \frac{1}{2}bh$ for b

24) $S = 2\pi rh + 2\pi r^2$ for h

Express the phrase as a ratio in lowest terms.

25) 18 miles to 12 miles

Tell which brand is the better buy.

26) Brand X 20 oz for $5.00 Brand Y 16 oz for $3.84

27) Brand X 4 oz for $0.44 Brand Y 6 oz for $0.72

Decide whether the proportion is true or false.

28) $\frac{6}{7} = \frac{30}{35}$

29) $\frac{6}{9} = \frac{18}{36}$

Solve the equation.

30) $\frac{x}{32} = \frac{7}{16}$

31) $\frac{4}{y} = \frac{8}{4}$

32) $\frac{1}{2} = \frac{r}{11}$

33) $\frac{5}{7} = \frac{8}{x+3}$

Solve the problem.

34) If a boat uses 19 gallons of gas to go 76 miles, how many miles can the boat travel on 76 gallons of gas?

35) If 4 hours are required to type 12 pages, how many hours would be required to type 21 pages?

36) A woman has $1.70 in dimes and nickels. She has 2 more dimes than nickels. How many nickels does she have?

37) A woman has $1.70 in dimes and nickels. She has 10 more nickels than dimes. How many dimes does she have?

Solve the problem.

38) A convention manager finds that she has $1370 made up of twenties and fifties. She has a total of 46 bills. How many fifty-dollar bills does the manager have?

39) A cashier has a total of 124 bills made up of fives and tens. The total value of the money is $770. How many ten-dollar bills does the cashier have?

40) From a point on a straight road, two cars are driven in opposite directions, one at 52 miles per hour and the other at 31 miles per hour. In how many hours will they be 249 miles apart?

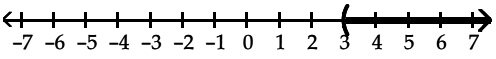
41) From a point on a straight road, John and Fred ride bicycles in same direction. John rides 7 miles per hour and Fred rides 13 miles per hour. In how many hours will they be 60 miles apart?

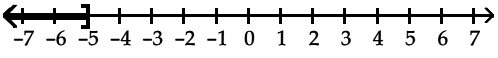
42) Jill is 22.5 kilometers away from Joe. Both begin to walk toward each other at the same time. Jill walks at 1.5 km/hr. They meet in 5 hours. How fast is Joe walking?

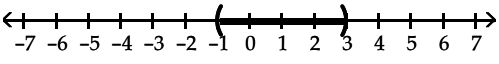
43) Roberto invested some money at 6%, and then invested $4000 more than twice this amount at 11%. His total annual income from the two investments was $3800. How much was invested at 11%?

44) Helen Weller had a total of $3000 to invest. She invested part of it in an account paying 2% simple interest and the rest at 4%. Her annual interest income was $100. How much did she invest in each account?

Write an inequality involving the variable x that describes the set of numbers graphed.

45) 

46) 

47) 

Write each inequality in interval notation and graph the interval on a number line.

48) $x \leq -2$

49) $-3 < x < 1$

Solve the inequality and write the solution set in interval notation.

50) $-.2z > -4.8$

Solve the inequality. Write the solution set in interval notation and graph it.

51) $7n + 4 > 6n + 1$

52) $9x - 18 > 3(2x + 1)$

53) $18n + 12 \leq 6(2n + 6)$

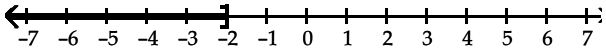
54) $8 < 4x \leq 32$

55) $7 \leq 3t - 2 \leq 19$

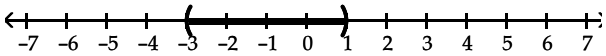
56) $-16 \leq -2c - 4 < -8$

Answer Key
Testname: DSPM0800TEST2REVIEW

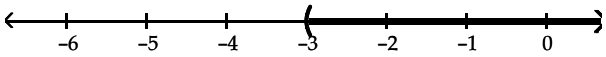
1) {12}
2) {13}
3) {-6}
4) { -19 }
5) {70}
6) $\left\{\frac{7}{18}\right\}$
7) {2}
8) {4}
9) {all real numbers}
10) {no solution}
11) {40}
12) {-1}
13) {-20}
14) 3x = 4x - 6
15) 7x - 6x = 9
16) 9
17) -24
18) 184 boys
19) 156 degrees
20) i
21) 33.49
22) 8
23) $b = \frac{2A}{h}$
24) $h = \frac{S - 2\pi r^2}{2\pi r}$
25) $\frac{3}{2}$
26) Brand Y
27) Brand X
28) TRUE
29) FALSE
30) 14
31) 2
32) $\frac{11}{2}$
33) $\frac{41}{5}$
34) 304 miles
35) 7 hours
36) 10 nickels
37) 8 dimes
38) 15 fifty-dollar bills
39) 30 ten-dollar bills
40) 3 hours
41) 10 hours
42) 3 km/hr
43) $28,000
44) $1,000 at 2% and $2,000 at 4%
45) $x > 3$
46) $x \leq -5$
47) $-1 < x < 3$
48) $(-\infty, -2]$



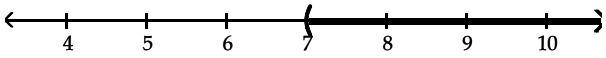
49) (-3, 1)



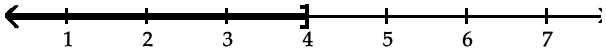
50) $(-\infty, 24)$
51) $(-3, \infty)$



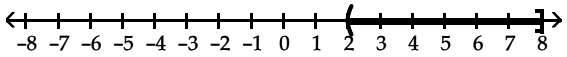
52) $(7, \infty)$



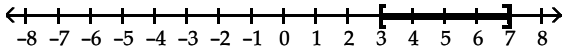
53) $(-\infty, 4]$



54) (2, 8]



55) [3, 7]



56) (2, 6]