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## SKILLS ASSESSMENT FOR DEVELOPMENTAL MATH 2

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**Do you have the algebra and arithmetic skills for Developmental Math 2? The skills needed to solve the problems on this assessment are skills required for this course. To increase your chance of success, we encourage you to take this assessment and score it. If you score below 70%, we strongly recommend that you enroll in Developmental Math 1 or brush up on your algebra skills before the start of the term.**

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**Add or subtract, as indicated.**

1)  $-4 + 3 - 12$

2)  $-\frac{2}{3} + \left(-\frac{5}{6}\right)$

3)  $-11.5 - (-7.2)$

4)  $12\frac{1}{20} - 1\frac{1}{4}$

5)  $8 + (-5) - (-6) - 10$

**Multiply.**

6)  $2.8(-5.49)$

7)  $-\frac{4}{5} \cdot \left(-\frac{1}{24}\right)$

8)  $-5(5)(-2)(-4)$

**Divide.**

9)  $-1.6 \div 0.02$

10)  $2\frac{1}{2} \div 5\frac{1}{8}$

**Simplify each expression.**

11)  $24 - (16 \div 4) + 5 \cdot 2^3$

12)  $(-4)^2 - 5^2$

13)  $\frac{7(-2) - 6 + 9}{-44 \div 4}$

14)  $(-16) \div (-4) \cdot |8 - 15|$

**Evaluate the expression for  $x = -2$  and  $y = 3$ .**

15)  $10x - 2y^2$

**Simplify the expression.**

16)  $9x - 8 + 2x - x + 3$

17)  $-5(2x - 7) - 4x + 10$

**Solve the equation.**

18)  $9x - 12 = 5x + 20$

19)  $2 - 3(3n - 2) = -10$

20)  $-\frac{5}{4}x = \frac{5}{20}$

21)  $5x - \frac{2}{5} = 4x + \frac{1}{3}$

22)  $0.8x + 1.4 = -3.4$

**Write the phrase as a variable expression.**

23) Five less than four times a number.

**Write the sentence as an equation. Do not solve.**

24) Three times the difference of 15 and a number is  $-27$ .

**Solve the problem.**

25) Four times the sum of a number and two is twenty-four less than eight times the number. Find the number.

**Solve the proportion.**

26)  $\frac{27}{18} = \frac{9}{x}$

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**Solve the problem by writing a proportion.**

- 27) If Sarah can type and spell check 6 pages of a manuscript in 22 minutes, how long will it take her to type and spell check 27 pages?

**Solve.**

- 28) 20% of what number is 62.

**Solve.**

- 29) 60% of the accountants in a business are female. If there are 210 accountants altogether, how many accountants are female?

**Complete the ordered pair solutions for the given equation.**

- 30)  $2x - y = 4$ ; (3, ), ( , 0), (4, )

	<u>ANSWER KEY</u>	<u># CORRECT</u>	<u>SCORE</u>
1) -13	20) $-\frac{1}{5}$	30	100
2) $-\frac{3}{2}$	21) $\frac{11}{15}$	29	96.7
3) -4.3	22) -6	28	93.3
4) $10\frac{4}{5}$	23) $4x - 5$	27	90
5) -1	24) $3(15 - x) = -27$	26	86.7
6) -15.372	25) 8	25	83.3
7) $\frac{1}{30}$	26) 6	24	80
8) -200	27) $\frac{6 \text{ pages}}{22 \text{ minutes}} = \frac{27 \text{ pages}}{x \text{ minutes}}$ ; 99 minutes	23	76.7
9) -80	28) 310	22	73.3
10) $\frac{20}{41}$	29) 126 accountants	21	70
11) 60	30) (3, 2); (2, 0); (4, 4)	20	66.7
12) -9		19	63.3
13) 1		18	60
14) 28		17	56.7
15) -38		16	53.3
16) $10x - 5$		15	50
17) $-14x + 45$		14	46.7
18) 8		13	43.3
19) 2		12	40
		11	36.7
		10	33.3
		9	30
		8	26.7
		7	23.3
		6	20
		5	16.7
		4	13.3
		3	10
		2	6.7
		1	3.3
		0	0