

Future 8th Grade Skinner Scholar and Family,

As the school year comes to a close, we realize that you are looking forward to the sunny days and relaxation!!

We also realize that students need to keep academic skills fresh for the next school year. Practicing math skills during the summer helps students make a smooth transition into 8th grade math. Therefore, we have compiled math assignments for you to complete before entering 8th grade.

These assignments are a review of 7th grade math standards including: multiplication of fractions, division of decimals, order of operations, solving one and two-step equations, and graphing lines in the form $y=mx$. These skills are needed to progress through the 8th grade math curriculum. In addition, the summer homework helps teachers identify student strengths and areas for growth.

The assignments attached are due the first day of school, August 22nd, to your math teacher.



All work and thinking for each assignment is to be completed on a separate sheet of paper and turned in stapled with the summer homework packet.

All incoming 8th grade students are expected to have multiplication facts memorized, fact families 1-12. An additional resource is www.multiplication.com or mathblaster.com for practice of multiplication and division facts. If you are having difficulties with a concept we suggest to visit khanacademy.com and/or youtube.com

Should you want more challenge, www.illustrativemathematics.org is a great site that offers challenging problems/tasks at all grade levels.

We are looking forward to having your student as members of the 2017-2018 8th grade Skinner family.

Sincerely,

The 8th Grade Math Team

If any questions arise, please feel free to contact Jessica Piwko (Math Department Chair) via email at Jessica_piwko@dpsk12.org

Students with Individualized Educations Plans (IEP) can contact Jessica Rydning via email at Jessica_rydning@dpsk12.org for a modified version of the summer homework.



To get credit : show all work and thinking!
Remember → simplify your answer if you can!

Multiplying Fractions

$$1) \quad \frac{3}{7} \times \frac{12}{14} =$$

$$2) \quad \frac{8}{14} \times \frac{1}{2} =$$

$$3) \quad \frac{1}{5} \times \frac{3}{14} =$$

$$4) \quad \frac{1}{5} \times \frac{1}{2} =$$

$$5) \quad \frac{6}{8} \times \frac{4}{14} =$$

$$6) \quad \frac{1}{2} \times \frac{6}{18} =$$

$$7) \quad \frac{1}{2} \times \frac{3}{14} =$$

$$8) \quad \frac{4}{5} \times \frac{9}{16} =$$

$$9) \quad \frac{7}{10} \times \frac{1}{5} =$$

$$10) \quad \frac{5}{12} \times \frac{13}{18} =$$



Name : _____

Score : _____

Teacher : _____

Date : _____

to get credit: show all work and thinking!

$$1.6 \overline{)139.2}$$

$$9.4 \overline{)460.6}$$

$$6.3 \overline{)403.2}$$

$$6.1 \overline{)475.8}$$

$$8.1 \overline{)186.3}$$

$$4.4 \overline{)193.6}$$

$$6.4 \overline{)358.4}$$

$$2.8 \overline{)190.4}$$

$$4.3 \overline{)421.4}$$



Directions: solve for the variable. show all work and thinking to earn credit!

$$15) \frac{v}{8} = 2$$

$$16) 16 = \frac{k}{11}$$

$$17) -15x = 0$$

$$18) -17x = -204$$

$$19) 21 = -7n$$

$$20) \frac{m}{4} = -13$$

$$21) -126 = 14k$$

$$22) -143 = -11x$$

$$23) -16 + x = -15$$

$$24) -5 = \frac{a}{18}$$

$$25) -17 = x - 15$$

$$26) n - 8 = -10$$

$$27) \frac{v}{7} = 8$$

$$28) a + 11 = 20$$

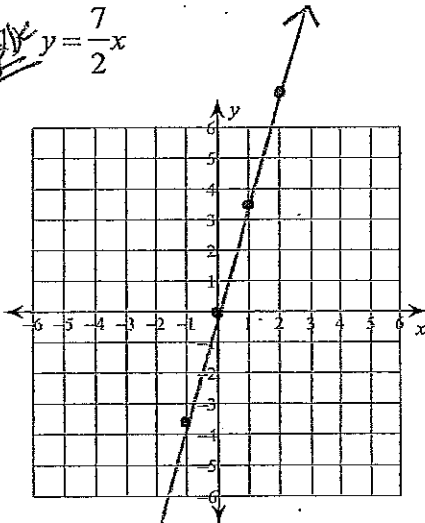
$$29) -7 + m = 8$$

$$30) 18 + m = 8$$

Graphing Lines

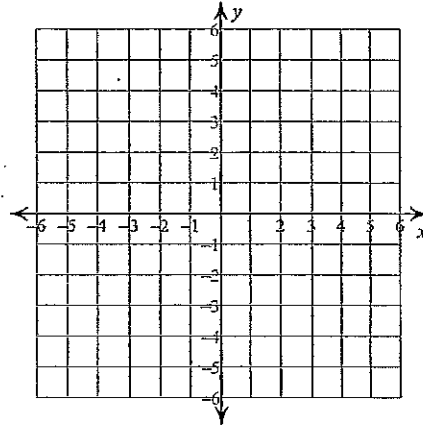
Sketch the graph of each line.

example $y = \frac{7}{2}x$



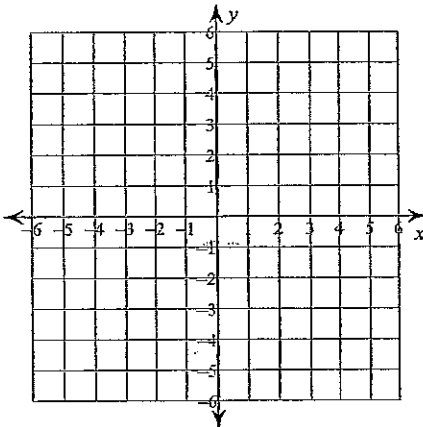
X	Y
0	0
1	$\frac{7}{2}$
-1	$-\frac{7}{2}$
2	7

2) $y = -6x$



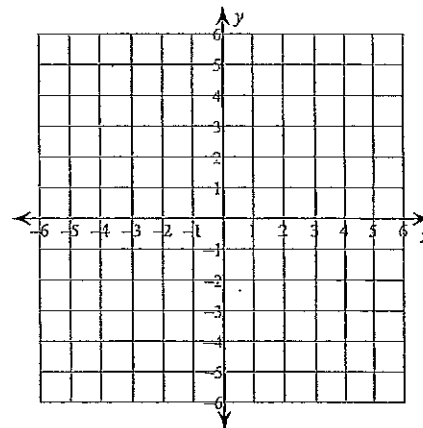
X	Y

3) $y = -5$



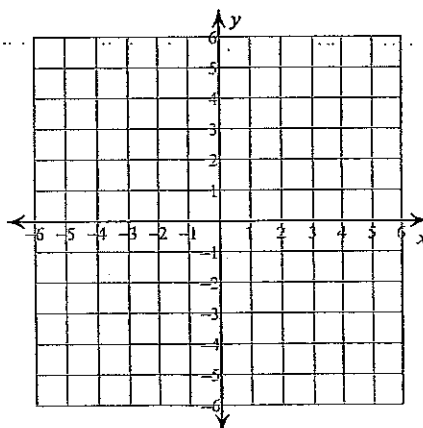
X	Y

4) $y = \frac{6}{5}x$



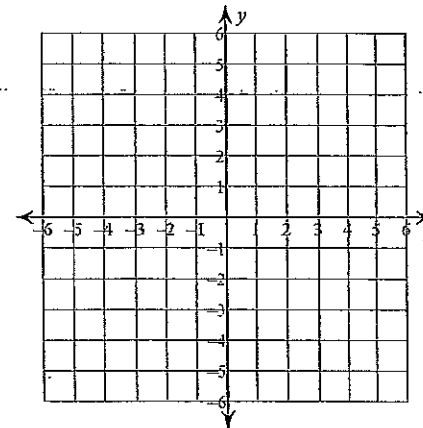
X	Y

5) $y = \frac{1}{4}x$



X	Y

6) $x = 5$



X	Y

Name _____ Date _____

Page _____

Unit 5 Two-Step Equations
(Distributive Property)

Worksheet

Lesson Objective

To use distributive property to solve equations. *Show all work and thinking to receive credit.*

1) $3(c+5)=12$

2) $3(t+4)=18$

3) $5(4d+8)=40$

4) $3(2x+7)=27$

5) $3(2+f)=-15$

6) $2(1+m)=16$

7) $-(2k-11)=7$

8) $-4(3x-2)=-32$

9) $\frac{3}{4}(4x+8)=-12$

10) $\frac{1}{3}(9c-36)=-9$

Name : _____

Score : _____

Teacher : _____

Date : _____

Show all work and thinking to receive credit!

Advanced Order of Operations

Evaluate each expression.

1) $5 - [9 \div 3]^2 \cdot 3 + 3$

2) $[(-54) \div (-9)]^2 - (-4) \cdot (-10) + (-10)$

3) $[(-54) \div (-9)]^3 - (-4) \cdot (-6) + (-6)$

4) $2 - 4 \cdot [4 - (-2)]^3 + (-4)$

5) $6 \cdot [(-10) \div 5 - (-5)]^2 - (-2)$

6) $7 - (-6) \cdot [(-5) - 7]^3 + 6$

7) $[78 \div 13]^3 - 8 \cdot 7 + 7$

8) $(-10) - [16 \div (-8)]^3 \cdot (-9) + 9$

9) $[3^3 + 7] \cdot 3 - 11 + 7$

10) $[(-72) \div (-2)]^2 - (-7) \cdot (-4) + (-4)$

11) $(-7) - [(-12) \div (-6)]^2 \cdot (-3) + (-3)$

12) $[78 \div 13]^3 - 8 \cdot 3 + 3$



Evaluate Expressions Guided Practice

Name: _____

If $f = 7$, $g = 10$, $h = 4$

1. $\frac{3+h}{g-3}$

2. $g^2 + 2h$

3. $\frac{4g}{h}$

4. $\frac{h^3 + g}{3h+2g+7}$

5. $\frac{6h-8}{2g}$

6. $\frac{(g^3 - 20f)}{4} \div 5$

7. $2(g + 3) - 13$

8. $10f - h^3$

9. $(2f - h) + \frac{f^2}{h+3}$

Evaluate Expressions Independent Practice

Name: _____

If $a = 3$, $b = 12$

1. $\frac{(ab)^2}{7b-b}$

2. $\frac{36-2b}{2}$

3. $\frac{2(b-a)}{6a}$

4. $3ab - 4a$

5. $a^0 + \frac{2b}{a}$

6. $b^2 - (4 + a^4)$

7. $\frac{10b}{a+7}$

8. $156 - 3b \div 4$

9. $(a \bullet 2)^5$

Select the correct answer(s) from the given options:

11. Use the distributive property of operations and choose the correct equivalent expression for the given expression.

$$6 + 3y + 4y + 5$$

- a) $7y + 11$
- b) $7y + 1$
- c) $y + 11$
- d) $11y + 7$

Answer: _____

12. Use the distributive property of operations and choose the correct equivalent expression for the given expression.

$$s + s + s + s + s + s$$

- a) $5 + s$
- b) $6s$
- c) $5s$
- d) $6 + s$

Answer: _____

13. Use the distributive property of operations and choose the correct equivalent expression for the given expression.

$$25t + 5$$

- a) $25(t + 1)$
- b) $5(5t + 1)$

Answer: _____

14. Use the distributive property of operations and choose the correct equivalent expression for the given expression.

$$18q + 9$$

- a) $2(9q + 1)$
- b) $2(1q + 9)$

Answer: _____

15. Use the distributive property of operations and choose the correct equivalent expression for the given expression.

$$8k + 28$$

- a) $2(4k + 12)$
- b) $4(2k + 7)$

Answer: _____

16. Use the distributive property of operations and choose the correct equivalent expression for the given expression.

$$42p + 54$$

- a) $6(7p + 9)$
- b) $7(6p + 9)$

Answer: _____

Algebra Practice Problems

Complete the algebraic equations. If the answer is a fraction,
reduce and convert it to a mixed number.

1.) $x + 7 - 4(x + 1) = -10$

2.) $5x - 4 + 2(x - 4) = 16$

3.) $20 + 3x - 15 + x = 27$

4.) $11 - 2x + 8x + 5 = 32$

5.) $5(2x - 7) + 42 - 3x = 2$

6.) $2(4x - 2) - 5x = -18$

7.) $30 - 6(x + 3) + 2x = 8$

8.) $23 + 4(x - 3) - x = 11$

9.) $2x - 14 + 3(x + 1) = -4$

10.) $6(2x + 2) + 12 = 50$