

7TH GRADE SUMMER MATH PACKET



NO CALCULATOR SHOULD BE USED IN THIS PACKET!

** Please bring this packet with you the first day of school. **

NAME _____

Adding/Subtracting Integers **NO CALCULATOR!****Find each sum.**

1) $(-12) + 7$

2) $(-10) + (-7)$

3) $(-6) + 12$

4) $8 + 7$

5) $3 + 4$

6) $(-45) + 9$

7) $(-1) + (-46)$

8) $(-30) + 10$

9) $(-34) + 50$

10) $38 + (-5)$

Find each difference.

11) $2 - (-2)$

12) $(-1) - 10$

13) $8 - 7$

14) $(-8) - (-6)$

$15) 11 - 4$

$16) 48 - (-31)$

$17) 18 - 41$

$18) (-38) - 30$

$19) (-1) - (-3)$

$20) (-1) - (-40)$

Evaluate each expression.

$21) (-10) - 47$

$22) (-29) - 29$

$23) 13 + (-29)$

$24) 38 + 22$

$25) (-32) - 44$

$26) (-12) + (-11)$

$27) 2 + 15 + 4$

$28) 16 + (-13) + 5$

$29) 2 - (-9) - 8$

$30) 10 + 3 - (-8)$

Multiplying Integers / Dividing Integers

Find each product.

NO CALCULATOR!

1) 6×-4

3) 3×-4

5) 5×-4

7) -5×6

9) -8×-2

11) -7×5

13) 10×5

15) -12×7

17) $9 \times 10 \times 6$

19) $7 \times 9 \times 7$

21) $-5 \times -4 \times -10$

23) $8 \times 3 \times 8$

Find each quotient.

1) $35 \div -5$

3) $-24 \div 4$

5) $8 \div 4$

7) $-21 \div 7$

9) $-132 \div -11$

11) $-52 \div -4$

1-2 Practice

Order of Operations

DON'T FORGET TO USE
PEMDAS!

Find the value of each expression. NO CALCULATOR!

1. $8 + 9 - 3 + 5$

3. $18 - 5 \cdot 2$

5. $(16 + 5) - (13 + 2)$

7. $32 \cdot 4 \div 2$

9. $6 + 5 \cdot 2 + 3$

11. $67 + 84 - 12 \cdot 4 \div 16$

13. $34 + 8 \div 2 + 4 \cdot 9$

15. $(15 + 21) \div 3$

17. $5 \cdot 6 - 25 \div 5 - 2$

19. $\frac{15 + 35}{21 + 4}$

21. $(13 + 4) + (17 \cdot 4)$

23. $10[8(15 - 7) - (4 \cdot 3)]$

State whether each equation is true or false.

25. $16 + 24 \div 8 - 4 = 1$

27. $5(35 - 18) + 1 = 102$

29. $25 \div 5 \cdot 4 = 20$

31. $28 \div 7 \cdot 5 \div 5 = 4$

Add/Subtracting Fractions and Mixed Numbers

Evaluate each expression. **NO CALCULATOR!**

1) $\frac{5}{4} - \frac{3}{4}$

15) $\frac{9}{5} - \frac{5}{8}$

3) $\frac{2}{5} + \frac{4}{5}$

17) $(-1) + \left(-2\frac{2}{5}\right)$

5) $6 - \frac{1}{6}$

19) $3\frac{6}{7} + \left(-1\frac{1}{7}\right)$

7) $\frac{1}{5} + \frac{1}{5}$

21) $2\frac{1}{3} + \left(-1\frac{2}{3}\right)$

9) $\left(-\frac{4}{5}\right) - \frac{7}{8}$

23) $\left(-1\frac{7}{8}\right) + \left(-3\frac{1}{2}\right)$

11) $\left(-\frac{1}{3}\right) + \frac{3}{8}$

25) $\left(-2\frac{5}{6}\right) - \left(-1\frac{1}{4}\right)$

13) $\frac{9}{5} + \left(-\frac{4}{3}\right)$

27) $1\frac{2}{5} - \left(-3\frac{3}{4}\right)$

Multiplying/Dividing Fractions and Mixed Numbers

Find each product. **NO CALCULATOR!**

Find each quotient.

1) $-\frac{5}{4} \cdot \frac{1}{3}$

11) $\frac{-1}{5} \div \frac{7}{4}$

3) $\frac{4}{9} \cdot \frac{7}{4}$

13) $\frac{-3}{2} \div \frac{-10}{7}$

5) $-2 \cdot \frac{3}{7}$

15) $\frac{-9}{5} \div 2$

7) $-2\frac{1}{5} \cdot -1\frac{3}{4}$

17) $-2 \div -3\frac{4}{5}$

9) $-1\frac{5}{7} \cdot -2\frac{1}{2}$

19) $1\frac{6}{7} \div 5\frac{3}{4}$

Reteaching 1-6

Solving Equations by Adding and Subtracting

To solve one-step equations:

- ① Use opposite, or inverse, operations to isolate the variable.
- ② Simplify.
- ③ Check by substituting your answer for the variable.

Solve and check each equation.

$$\begin{aligned}
 x + 7 &= 34 \\
 x + 7 - 7 &= 34 - 7 && \leftarrow \text{Subtract 7 from each side.} \\
 x &= 27 && \leftarrow \text{Simplify.} \\
 \text{Check: } x + 7 &= 34 \\
 27 + 7 &\stackrel{?}{=} 34 \\
 34 &= 34 \checkmark
 \end{aligned}$$

$$\begin{aligned}
 n - 5 &= 37 \\
 n - 5 + 5 &= 37 + 5 && \leftarrow \text{Add 5 to each side.} \\
 n &= 42 && \leftarrow \text{Simplify.} \\
 \text{Check: } n - 5 &= 37 \\
 42 - 5 &\stackrel{?}{=} 37 \\
 37 &= 37 \checkmark
 \end{aligned}$$

Show your steps to solve each equation. Then check. **NO CALCULATOR!**

1. $n + 5 = 11$

$$\begin{aligned}
 n + 5 - \square &= 11 - \square \\
 n &= \square
 \end{aligned}$$

Check: $n + 5 = 11$

$$\begin{aligned}
 \square + 5 &\stackrel{?}{=} 11 \\
 \square &= 11
 \end{aligned}$$

2. $13 + b = 27$

$$\begin{aligned}
 13 + b - \square &= 27 - \square \\
 b &= \square
 \end{aligned}$$

Check: $13 + b = 27$

$$\begin{aligned}
 13 + \square &\stackrel{?}{=} 27 \\
 \square &= 27
 \end{aligned}$$

3. $y - 18 = 24$

Check: _____

Solve.

4. $6 = f + 12$

$f =$ _____

5. $-18 = s + (-23)$

$s =$ _____

6. $w + 4 = \frac{1}{2}$

$w =$ _____

7. $b - 29 = -3$

$b =$ _____

8. $9 = k + 17$

$k =$ _____

9. $14 + m = -7$

$m =$ _____

10. $27 = j - 13$

$j =$ _____

11. $-14 + t = -5$

$t =$ _____

12. $x - 7 = -24$

$x =$ _____

Reteaching 1-7

Solving Equations by Multiplying and Dividing

To solve one-step equations:

- ① Use opposite, or inverse, operations to isolate the variable.
- ② Simplify.
- ③ Check by substituting your answer for the variable.

Solve and check each equation.

$$7y = 84$$

$$\frac{7y}{7} = \frac{84}{7}$$

$$y = 12$$

Check: $7y = 84$

$$7 \cdot 12 \stackrel{?}{=} 84$$

$$84 = 84 \checkmark$$

← Divide each side by 7.

← Simplify.

$$\frac{w}{5} = 20$$

$$5 \cdot \frac{w}{5} = 5 \cdot 20$$

$$w = 100$$

Check: $\frac{w}{5} = 20$

$$\frac{100}{5} \stackrel{?}{=} 20$$

$$20 = 20 \checkmark$$

← Multiply each side by 5.

← Simplify.

Show your steps to solve each equation. Then check. **NO CALCULATOR!**

1. $3x = 18$

$$\frac{3x}{3} = \frac{18}{3}$$

$$x = 6$$

Check: $3x = 18$

$$3 \cdot \square \stackrel{?}{=} 18$$

$$\square = 18$$

2. $\frac{y}{-5} = -13$

$$\frac{y}{-5} \cdot \square = -13 \cdot \square$$

$$y = \square$$

Check: $\frac{y}{-5} = -13$

$$\frac{\square}{-5} \stackrel{?}{=} -13$$

$$\square = -13$$

3. $y \cdot 8 = 24$

Check: $y \cdot 8 = 24$

Solve.

4. $-16 = -8x$

$$x = \underline{\hspace{2cm}}$$

5. $\frac{b}{0.4} = 1.6$

$$b = \underline{\hspace{2cm}}$$

6. $7.5 = 1.5c$

$$c = \underline{\hspace{2cm}}$$

7. $\frac{b}{17} = -3$

$$b = \underline{\hspace{2cm}}$$

8. $9 = -k$

$$k = \underline{\hspace{2cm}}$$

9. $-14m = -70$

$$m = \underline{\hspace{2cm}}$$

10. $-0.4 = \frac{j}{22}$

$$j = \underline{\hspace{2cm}}$$

11. $-13t = -91$

$$t = \underline{\hspace{2cm}}$$

12. $4.5x = 27$

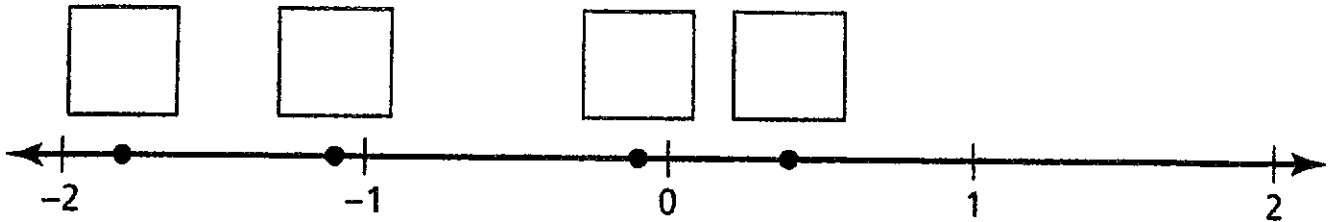
$$x = \underline{\hspace{2cm}}$$

Student Worksheet

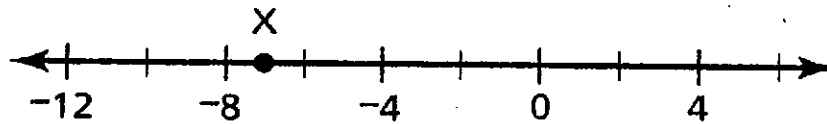
1. Komiko wants to plot the numbers below on a number line.

-1.8 0.4 -0.1 -1.1

In the boxes above the points on the number line, write the correct number for each point.

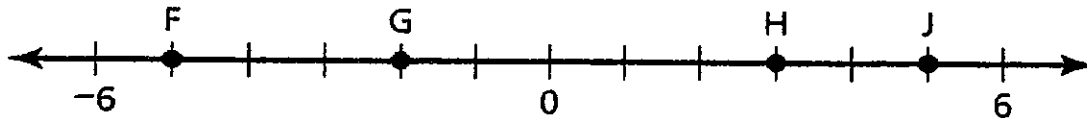


2. What number is represented by point X on the number line?



- A -6
- B -7
- C -9
- D -10

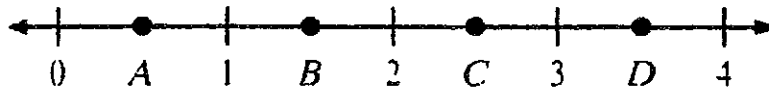
3. Which point on the number line is greater than -4 but less than 0?



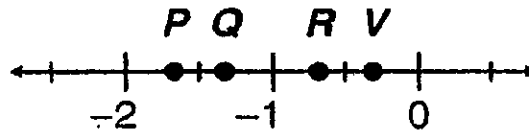
- F F
- G G
- H H
- J J

Student Worksheet

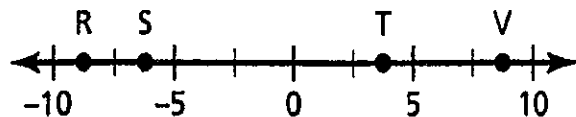
1. Which point shows the location of $\frac{3}{2}$ on the number line?



- A point A
B point B
C point C
D point D
2. Which point *best* represents $-1\frac{3}{8}$ on the number line below?



- A P
B Q
C R
D V
3. Which point on the number line below represents a number that is less than -2.5 but greater than -7.5 ?



- A point R
B point S
C point T
D point V

2-3**Practice**

Form G

Solving Multi-Step Equations**Solve each equation. Check your answer.**

1. $19 - h - h = -13$

2. $14 + 6a - 8 = 18$

3. $25 = 7 + 3k - 12$

4. $5n - 16 - 8n = -10$

5. $-34 = v + 42 - 5v$

6. $x - 1 + 5x = 23$

7. $42j + 18 - 19j = -28$

8. $-49 = 6c - 13 - 4c$

9. $-28 + 15 - 22z = 31$

Write an equation to model each situation. Then solve the equation.

10. General admission tickets to the fair cost \$3.50 per person. Ride passes cost an additional \$5.50 per person. Parking costs \$6 for the family. The total costs for ride passes and parking was \$51. How many people in the family attended the fair?

11. Five times a number decreased by 18 minus 4 times the same number is -36 . What is the number?

Solve each equation. Check your answer.

12. $6(3m + 5) = 66$

13. $3(4y - 8) = 12$

14. $-5(x - 3) = -25$

15. $42 = 3(2 - 3h)$

16. $-10 = 5(2w - 4)$

17. $3p - 4 = 31$

18. $-3 = -3(2t - 1)$

19. $x - 2(x + 10) = 12$

20. $-15 = 5(3q - 10) - 5q$

21. Angela ate at the same restaurant four times. Each time she ordered a salad and left a \$5 tip. She spent a total of \$54. Write and solve an equation to find the cost of each salad.



2-4**Practice**

Form G

Solving Equations With Variables on Both Sides**Solve each equation. Check your answer.**

1. $3n + 2 = -2n - 8$

2. $8b - 7 = 7b - 2$

3. $-12 + 5k = 15 - 4k$

4. $-q - 11 = 2q + 4$

5. $4t + 9 = -8t - 13$

6. $22p + 11 = 4p - 7$

7. $17 - 9y = -3 + 16y$

8. $15m + 22 = -7m + 18$

9. $3x + 7 = 14 + 3x$

Write and solve an equation for each situation. Check your solution.

10. Shirley is going to have the exterior of her home painted. Tim's Painting charges \$250 plus \$14 per hour. Colorful Paints charges \$22 per hour. How many hours would the job need to take for Tim's Painting to be the better deal?
11. Tracey is looking at two different travel agencies to plan her vacation. ABC Travel offers a plane ticket for \$295 and a rental car for \$39 per day. M & N Travel offers a plane ticket for \$350 and a rental car for \$33 per day. What is the minimum number of days that Shirley's vacation should be for M & N Travel to have the better deal?

Solve each equation. Check your answer.

12. $7(h + 3) = 6(h - 3)$

13. $-(5a + 6) = 2(3a + 8)$

14. $-2(2f - 4) = -4(-f + 2)$

15. $3w - 6 + 2w = -2 + w$

16. $-8x - (3x + 6) = 4 - x$

17. $14 + 3n = 8n - 3(n - 4)$

Determine whether each equation is an *identity* or whether it has *no solution*.

18. $4(3m + 4) = 2(6m + 8)$

19. $5x + 2x - 3 = -3x + 10x$

20. $-(3z + 4) = 6z - 3(3z + 2)$

21. $-2(j - 3) = -2j + 6$