

10-09-18

Aim: SWBAT continue to add and subtract fractions and mixed numbers with signs.

HW: Packet Page 14

Quiz tomorrow (Packet Pages 1 - 10)

Do Now: Packet Page 13 (Use a calculator)

HOMEWORK

Compute. Express the answer in simplest form.

$3\frac{1}{5} - 8\frac{1}{2}$ ← more negatives

1) $5\frac{3}{7} + 2\frac{1}{2} = \frac{111}{14}$ OR $7\frac{13}{14}$

2) $3\frac{1}{5} + (-8\frac{1}{2}) = \frac{-53}{10}$ OR $-5\frac{3}{10}$

Method A

$$\frac{38 \cdot 2}{7 \cdot 2} + \frac{5 \cdot 7}{2 \cdot 7}$$

$$\boxed{\frac{76}{14} + \frac{35}{14}}$$

$$\frac{111}{14}$$

Method B

$$5\frac{3 \cdot 2}{7 \cdot 2} = 5\frac{6}{14}$$

$$+ 2\frac{1 \cdot 7}{2 \cdot 7} = 2\frac{7}{14}$$

$$7\frac{13}{14}$$

Method A

$$\frac{16 \cdot 2}{5 \cdot 2} - \frac{17 \cdot 5}{2 \cdot 5}$$

$$\boxed{\frac{32}{10} - \frac{85}{10}}$$

$$\frac{-53}{10}$$

Method B

$$8\frac{1 \cdot 5}{2 \cdot 5} = 8\frac{5}{10}$$

$$- 3\frac{1 \cdot 2}{5 \cdot 2} = 3\frac{2}{10}$$

$$5\frac{3}{10}$$

3) $-4\frac{3}{4} - 5\frac{5}{8} = \frac{-83}{8}$ OR $-10\frac{3}{8}$

4) $-5\frac{5}{8} + 1\frac{2}{3} = \frac{-95}{24}$ OR $-3\frac{23}{24}$

Method A

$$\frac{-19 \cdot 2}{4 \cdot 2} - \frac{45}{8}$$

$$\frac{-38}{8} - \frac{45}{8}$$

$$\frac{-83}{8}$$

Method B

$$4\frac{3 \cdot 2}{4 \cdot 2} = 4\frac{6}{8}$$

$$+ 5\frac{5}{8} = 5\frac{5}{8}$$

$$9\frac{11}{8} = 10\frac{3}{8}$$

Method A

$$\frac{-45 \cdot 3}{8 \cdot 3} + \frac{5 \cdot 8}{3 \cdot 8}$$

$$\frac{-135}{24} + \frac{40}{24}$$

$$\frac{-95}{24}$$

Method B

$$5\frac{5 \cdot 3}{8 \cdot 3} = 5\frac{15}{24} = 4\frac{39}{24}$$

$$- 1\frac{2 \cdot 8}{3 \cdot 8} = 1\frac{16}{24} = 1\frac{16}{24}$$

$$3\frac{23}{24}$$

5) What is the sum of $-\frac{5}{8}$ and $-\frac{1}{2}$?

$$-\frac{5}{8} + (-\frac{1 \cdot 4}{2 \cdot 4})$$

$$\boxed{\frac{-5}{8} - \frac{4}{8}}$$

$$\frac{-9}{8} \text{ OR } -1\frac{1}{8}$$

Aim: SWBAT continue to add and subtract fractions and mixed numbers with signs.

Do Now: Fill in the rules for adding and subtracting integers.

Same Signs - Add and Keep Different Signs - Subtract and Think

Adding and subtracting Fractions and Mixed Numbers

Step 1) Eliminate double signs and make all terms fractions.

Step 2) Find the LCD and make equivalent fractions.

Step 3) Use integer rules to compute the numerator. Keep the denominator.

Step 4) Write the answer in simplest form.

$$1) \frac{-4}{5} + \frac{2}{3} = \frac{-2}{15}$$

$$\boxed{\frac{-12}{15} + \frac{10}{15}} = \frac{-2}{15}$$

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

$$-\frac{2}{5} - \frac{3}{5} = -\frac{5}{5} = -1$$

$$3) 6 - \frac{4}{5} = 5\frac{1}{5}$$

$$6 = 5\frac{5}{5}$$

$$- \frac{4}{5} = \frac{4}{5}$$

$$5\frac{1}{5}$$

$$4) 3\frac{5}{8} - 1\frac{1}{3} = \frac{119}{24} \text{ OR } 4\frac{23}{24}$$

Method A

$$\frac{29 \cdot 3}{8 \cdot 3} + \frac{4 \cdot 8}{3 \cdot 8}$$

$$\frac{87}{24} + \frac{32}{24}$$

$$\frac{119}{24}$$

Method B

$$3\frac{5 \cdot 3}{8 \cdot 3} = 3\frac{15}{24}$$

$$+ 1\frac{1 \cdot 8}{3 \cdot 8} = 1\frac{8}{24}$$

$$4\frac{23}{24}$$

$$5) -\frac{1}{8} + (1\frac{1}{4}) = \frac{9}{8}$$

$$-\frac{1}{8} + \frac{5 \cdot 2}{4 \cdot 2}$$

$$\boxed{\frac{-1}{8} + \frac{10}{8}} = \frac{9}{8}$$

$$\frac{87}{24} + \frac{32}{24} = \frac{119}{24}$$

$$6) -4\frac{2}{3} + 3\frac{4}{5} = -\frac{13}{15}$$

Method A

$$-\frac{14 \cdot 5}{3 \cdot 5} + \frac{19 \cdot 3}{5 \cdot 3}$$

$$\boxed{\frac{-70}{15} + \frac{57}{15}} = -\frac{13}{15}$$

Method B

$$\boxed{-4\frac{2}{3} + 3\frac{4}{5}}$$

$$4\frac{2 \cdot 5}{3 \cdot 5} = 4\frac{10}{15} = 3\frac{25}{15}$$

$$- 3\frac{4 \cdot 3}{5 \cdot 3} = 3\frac{12}{15} = 3\frac{12}{15}$$

$$\frac{13}{15}$$

HOMEWORK

Find the answers using a scientific calculator. Write answers as an improper fraction
 AND as a mixed number where applicable.

1. $\frac{4}{5} + \left(-\frac{7}{5}\right) = a$

2. $-\frac{5}{4} + \left(-\frac{7}{4}\right) = m$

3. $-\frac{5}{8} + \frac{1}{6} = b$

4. $y = -\frac{1}{2} + \left(-\frac{3}{4}\right)$

5. $z = 4\frac{1}{2} + -3\frac{2}{3}$

6. $b = -5\frac{2}{3} + \left(-8\frac{1}{2}\right)$

7. $-10 + 7\frac{1}{3} = y$

8. $-1\frac{2}{7} + \left(-5\frac{3}{14}\right) = p$

9. $9\frac{5}{6} + \left(-8\frac{3}{4}\right) = m$

10. $x = -\frac{5}{8} + \frac{7}{24}$

11. $-6\frac{1}{2} + \left(-4\frac{2}{3}\right) = h$

12. $-1\frac{3}{11} + \left(-5\frac{4}{5}\right) = z$

13. $-16\frac{3}{4} + 8\frac{4}{5} = b$

14. $-5\frac{2}{3} + \left(-1\frac{1}{9}\right) = r$

15. $8\frac{7}{9} + 6\frac{1}{5} = a$

16. $-21\frac{4}{7} + 8\frac{11}{21} = m$

17. $52\frac{12}{17} + \left(-15\frac{8}{34}\right) = d$

18. $-4\frac{3}{4} + 6\frac{5}{8} + \left(-4\frac{1}{16}\right) = k$

State the property shown.

19. $3\frac{1}{4} + \left(-3\frac{1}{4}\right) = 0$

20. $\left(-\frac{1}{2} + \frac{3}{4}\right) + \frac{5}{6} = -\frac{1}{2} + \left(\frac{3}{4} + \frac{5}{6}\right)$

21. $-\frac{5}{7} + \frac{1}{3}$ is rational

22. $8\frac{2}{3} + 0 = 8\frac{2}{3}$

23. $\frac{3}{4} + \left(-\frac{5}{7}\right) = -\frac{5}{7} + \frac{3}{4}$

Solve each of the following. Write your answers in simplest form.

24. $5 - 2\frac{1}{3} = p$

25. $-5\frac{2}{3} - 8 = d$

26. $-9\frac{1}{3} - \left(6\frac{2}{3}\right) = b$

27. $-11\frac{1}{2} - \left(-16\frac{1}{2}\right) = c$

28. $t = -4\frac{1}{5} - \left(-3\frac{7}{10}\right)$

29. $r = 8\frac{2}{5} - 3\frac{1}{2}$

30. $x = 7\frac{1}{5} - \left(-3\frac{3}{4}\right)$

31. $3\frac{1}{7} - 8\frac{5}{6} = h$

32. $-12\frac{5}{8} - \left(-3\frac{1}{4}\right) = k$