Thursday, August 30, 2012

T.I.S.K. Problems

1. Evaluate: $\frac{4}{5} + \frac{2}{3}$

2. Find the constant difference and tell which difference is constant in the sequence:
   -50, -12, 2, 4, 6, 20, 58, …

3. Evaluate: $3 - (9 - 5)^2$

We will have **3** Mental Math Questions today.

Homework: 2.7 Worksheet

Homework Check

1) a

2) $10f$

3) $3r$

4) $3d$

5) $2a - 1$

6) $4mp$

7) $3b$

8) $12p - 3q$

9) $-4c + 4$ or $4 - 4c$

10) r

11) $2q + 5$

12) $-3t + x$

13) $3f + 10g$

14) $f - 5h$

15) $3r - 2s + 4$

16) $x - y$

§2.7 Dividing Expressions

- ## What is division?
  - ◦ Multiplication by a reciprocal
- ## What does that mean?
  - ◦ $54 \div 9 = 54 \cdot \frac{1}{9} = 6$
  - ◦ $108 \div 6 = 108 \cdot \frac{1}{6} = 18$
  - ◦ $8 \div 32 = 8 \cdot \frac{1}{32} = \frac{1}{4}$
  - ◦ $21 \div 6 = 21 \cdot \frac{1}{6} = \frac{7}{2}$
  - ◦ $\frac{3}{5} \div \frac{9}{20} = \frac{3}{5} \cdot \frac{20}{9} = \frac{4}{3}$

§2.7 Dividing Expressions

- How is that helpful?
  - $$\frac{15x+6}{3}$$
    - We can now write this as $(15x + 6)\frac{1}{3}$
    - Time to use the Distributive Property!
  - $= \frac{1}{3}(15x) + \frac{1}{3}(6)$
  - $= 5x + 2$

§2.7 Dividing Expressions

- You try it (on your white board):
- $\dfrac{24y+16}{8} = 3y + 2$
- $\dfrac{18p-27}{9} = 2p - 3$
- $\dfrac{6r-4}{-2} = -3r + 2$
- $\dfrac{-8z+8}{-8} = z - 1$

§2.7 Dividing Expressions

- Now for something a little different…

- $$\frac{3x^2+6x}{x}$$

  ◦ We'll still use the idea that division is multiplication by a reciprocal.

  ◦ Therefore this is:

    • $\frac{1}{x}(3x^2 + 6x)$

    • $= \frac{1}{x}(3x^2) + \frac{1}{x}(6x)$

    • $= 3x+6$

$$\frac{1}{x} \cdot 3 \cdot x^2 = \frac{1}{x} \cdot x^2 \cdot 3$$

$$= \frac{1}{x} \cdot x \cdot x \cdot 3$$

$$= x \cdot 3$$

§2.7 Dividing Expressions

- Your turn. Pick up your white board and try these problems.

- $\dfrac{4ac^2 + 3c}{c} = 4ac + 3$

- $\dfrac{n^3 + 4n^4}{n} = n^2 + 4n^3$

- $\dfrac{2ab^2 + 7cb}{b} = 2ab + 7c$

- $\dfrac{24w^3 + 15w}{3w} = 8w^2 + 5$

Homework

- 2.7 Worksheet
- OPTIONAL: Review Chapter 2 by completing the Chapter test in the book.