

Feb. 9, 2018

Warmup

$$a) \frac{2}{3} \times \frac{3}{4}$$

$$= \frac{6}{12} \begin{array}{l} \div 3 \\ \div 3 \end{array}$$

$$= \frac{2}{4} \begin{array}{l} \div 2 \\ \div 2 \end{array}$$

$$= \boxed{\frac{1}{2}}$$

$$b) ((-2) + (-4))^2 - (18 - 20 \div 2)$$

$$= (-6)^2 - (18 - 20 \div 2)$$

$$= (-6)^2 - (18 - 10)$$

$$= (-6)^2 - 8$$

$$= +36 - 8$$

$$= \boxed{28}$$

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Multiplying and
Dividing Fractions

Ex.

a) $\frac{3}{5} \times -\frac{2}{3}$

2, 3, 5, 10, 100.

$$= \frac{-6 \div 3}{15 \div 3}$$

$$= \boxed{\frac{-2}{5}}$$

$$b) \frac{2}{3} \times \frac{1}{2} \times \frac{2}{5}$$

$$= \frac{2}{6} \times \frac{2}{5}$$

$$= \frac{4}{30} \div 2$$

$$= \boxed{\frac{2}{15}}$$

$$c) \frac{3}{4} \times \frac{3}{2} \times \frac{2}{3}$$

$$= \frac{9}{8} \times \frac{2}{3}$$

$$= \frac{18}{24} \begin{array}{l} \div 3 \\ \div 3 \end{array}$$

$$= \frac{6}{8} \begin{array}{l} \div 2 \\ \div 2 \end{array}$$

$$= \boxed{\frac{3}{4}}$$

Dividing Fractions

To divide fractions, we flip the second fraction then multiply.

$$d) \quad \frac{3}{4} \div \frac{4}{5}$$

$$= \frac{3}{4} \times \frac{5}{4}$$

$$= \boxed{\frac{15}{16}}$$

$$e) \quad \frac{2}{5} \div \frac{2}{3}$$

$$= \frac{2}{5} \times \frac{3}{2}$$

$$= \frac{6}{10} \begin{matrix} \div 2 \\ \div 2 \end{matrix}$$

$$= \boxed{\frac{3}{5}}$$

$$f) 4\frac{1}{2} \div 3\frac{3}{4}$$

$$= \frac{9}{2} \div \frac{15}{4}$$

$$= \frac{9}{2} \times \frac{4}{15}$$

$$= \frac{36}{30} \begin{array}{l} \div 2 \\ \div 2 \end{array}$$

$$= \frac{18}{15} \begin{array}{l} \div 3 \\ \div 3 \end{array}$$

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

g)
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$$\frac{2}{3} \div \frac{1}{2} \times \frac{2}{3}$$

$$= \frac{2}{3} \times \frac{2}{1} \times \frac{2}{3}$$

$$= \frac{4}{3} \times \frac{2}{3}$$

$$= \boxed{\frac{8}{9}}$$