

Fractions are friends

Hour _____

Perform the given operation. Write your final answers as reduced improper fractions. Do not use a calculator!

1) $\frac{1}{3} + \left(-\frac{7}{4}\right)$

2) $\left(-\frac{11}{6}\right) - \frac{1}{2}$

3) $2 - \left(-\frac{3}{4}\right) - \left(-\frac{8}{7}\right) - 2$

4) $\frac{1}{6} - 3 - \frac{1}{2} + \frac{1}{5}$

5) $5\frac{1}{2} \cdot -2\frac{9}{10}$

6) $2 \cdot -\frac{5}{3}$

7) $-1\frac{3}{4} \cdot 3\frac{3}{8}$

8) $-3 \cdot -\frac{4}{3} \cdot -\frac{5}{3}$

9) $\frac{-8}{5} \div \frac{2}{5}$

10) $\frac{-8}{5} \div \frac{-17}{9}$

11) $\frac{-\frac{11}{7}}{\frac{5}{8}}$

12) $\frac{-\frac{2}{17}}{\frac{10}{10}}$

Perform the given operation. Write your final answers as reduced fractions. Factor the denominator first & keep your final answer in this form.

13) $\frac{4m-6}{12m-20} + \frac{6m}{12m-20}$

14) $\frac{3r-4}{6r^3-6r} + \frac{4r+1}{6r^3-6r}$

15) $\frac{r+3}{2r-10} + \frac{4}{2r}$

16) $\frac{3x}{3} + \frac{x-5}{3x^3+3x^2-18x}$

Perform the given operation. Write your final answers as reduced fractions. Factor the numerator & denominator first & keep your final answer in this form.

$$17) \frac{r^2 + r - 20}{r + 5} \cdot \frac{4}{r - 4}$$

$$18) \frac{x - 4}{6x^2 + 12x} \cdot \frac{6x + 12}{2x + 14}$$

$$19) \frac{x^2 - 5x - 6}{5x^2 - 30x} \cdot \frac{35x^2 - 5x}{28x - 4}$$

$$20) \frac{16x^2 - 25}{12p - 36} \cdot \frac{6p}{4x + 5}$$

$$21) \frac{1}{30x^2} \div \frac{x - 8}{x^2 - 14x + 48}$$

$$22) \frac{10p^2 - 6p - 16}{2p + 2} \div \frac{35p - 56}{6p^3 - 12p^2}$$

$$23) \frac{7p - 3}{9p + 12} \div \frac{35p^2 - 15p}{21p^2 + 28p}$$