

Problem Set

- Write the indicated expressions.
 - $\frac{1}{2}m$ inches in feet.
 - The perimeter of a square with $\frac{2}{3}g$ cm sides.
 - The number of pounds in 9 oz.
 - The average speed of a train that travels x miles in $\frac{3}{4}$ hour.
 - Devin is $1\frac{1}{4}$ years younger than Eli. April is $\frac{1}{5}$ as old as Devin. Jill is 5 years older than April. If Eli is E years old, what is Jill's age in terms of E ?
- Rewrite the expressions by collecting like terms.
 - $\frac{1}{2}k - \frac{3}{8}k$
 - $\frac{2r}{5} + \frac{7r}{15}$
 - $-\frac{1}{3}a - \frac{1}{2}b - \frac{3}{4} + \frac{1}{2}b - \frac{2}{3}b + \frac{5}{6}a$
 - $-p + \frac{3}{5}q - \frac{1}{10}q + \frac{1}{9} - \frac{1}{9}p + 2\frac{1}{3}p$
 - $\frac{5}{7}y - \frac{y}{14}$
 - $\frac{3n}{8} - \frac{n}{4} + 2\frac{n}{2}$
- Rewrite the expressions by using the distributive property and collecting like terms.

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| a. $\frac{4}{5}(15x - 5)$ | b. $\frac{4}{5}\left(\frac{1}{4}c - 5\right)$ | c. $2\frac{4}{5}v - \frac{2}{3}(4v + 1\frac{1}{6})$ |
| d. $8 - 4\left(\frac{1}{8}r - 3\frac{1}{2}\right)$ | e. $\frac{1}{7}(14x + 7) - 5$ | f. $\frac{1}{5}(5x - 15) - 2x$ |
| g. $\frac{1}{4}(p + 4) + \frac{3}{5}(p - 1)$ | h. $\frac{7}{8}(w + 1) + \frac{5}{6}(w - 3)$ | i. $\frac{4}{5}(c - 1) - \frac{1}{8}(2c + 1)$ |
| j. $\frac{2}{3}\left(h + \frac{3}{4}\right) - \frac{1}{3}\left(h + \frac{3}{4}\right)$ | k. $\frac{2}{3}\left(h + \frac{3}{4}\right) - \frac{2}{3}\left(h - \frac{3}{4}\right)$ | l. $\frac{2}{3}\left(h + \frac{3}{4}\right) + \frac{2}{3}\left(h - \frac{3}{4}\right)$ |
| m. $\frac{k}{2} - \frac{4k}{5} - 3$ | n. $\frac{3t + 2}{7} + \frac{t - 4}{14}$ | o. $\frac{9x - 4}{10} + \frac{3x + 2}{5}$ |
| p. $\frac{3(5g - 1)}{4} - \frac{2g + 7}{6}$ | q. $-\frac{3d + 1}{5} + \frac{d - 5}{2} + \frac{7}{10}$ | r. $\frac{9w}{6} + \frac{2w - 7}{3} - \frac{w - 5}{4}$ |
| s. $\frac{1 + f}{5} - \frac{1 + f}{3} + \frac{3 - f}{6}$ | | |