Aiden wrote a riddle: Five less than $\frac{1}{5}$ times a number is the same as the sum of the number and $\frac{1}{3}$. Find the number.

Answers vary. Sample:

\[
\frac{x}{5} - 5 = x + \frac{1}{3};
\]

\[x = -6\frac{2}{3} \quad \text{or} \quad x = -\frac{20}{3}\]

Mary is 6 years older than her sister Kelly. The sum of their ages is 48. How old is Kelly? Answers vary. Sample:

\[x + (x + 6) = 48\]

21 years old

Solution
**Consecutive #’s**

23. The sum of the page numbers of two facing pages in a book is 145. What are the page numbers? **Answers vary. Sample:** 
\[ x + (x + 1) = 145 \]
72; 73

24. The perimeter of an equilateral triangle is \(6 \frac{3}{4}\) inches. Find the length of each side of the equilateral triangle. **Answers vary. Sample:** 
\[ 3x = 6 \frac{3}{4}; 2 \frac{1}{4} \text{ in.} \]

*all 3 sides are equal!*
25 The sum of the interior angle measures of a quadrilateral is $360^\circ$. The measure of angle $A$ is three times the measure of angle $D$. The measure of angle $B$ is four times that of angle $D$. The measure of angle $C$ is $24^\circ$ more than angle $B$. Find the measure of each angle of the quadrilateral.

$$3x + 4x + (4x + 24) + x = 360;$$
$$m\angle A = 84^\circ; m\angle B = 112^\circ;$$
$$m\angle C = 136^\circ; m\angle D = 28^\circ$$
Write an inequality for each question. Solve and show your work.

26. Laura wants the average amount of money she spends each day on her four-day vacation to be no more than $64. On the first three days, she spends $71, $62, and $59. What is the greatest amount of money she can spend on the fourth day? Answers vary. Sample: \( \frac{71 + 62 + 59 + x}{4} \leq 64 \); At most $64

27. \( 18p < 8p + 200 \); Option B is less expensive for less than 20 hours of training.
28. Peter has found a job in a computer store. As shown below, he has two options for how he will be paid. The commission he makes for Option B is based on his weekly sales. For example, if his sales total $1,000 a week, he receives his base salary of $250 plus 8% of $1,000.

<table>
<thead>
<tr>
<th>Option A</th>
<th>Option B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed salary of $600 per week with no commission</td>
<td>Fixed salary of $250 per week plus commission of 8% of his weekly sales</td>
</tr>
</tbody>
</table>

Peter is thinking about Option B. What would his weekly sales need to be for him to make at least as much as he would for Option A?

Answers vary. Sample: 250 + 0.08s \geq 600; At least $4,375
29. The school events committee is planning to buy a banner and some helium balloons for graduation night. A store charges them $35 for the banner and $3.50 for each helium balloon. If the committee has at most $125 to spend, how many helium balloons can they buy?

Answers vary. Sample: $35 + 3.5h \leq 125; \text{At most 25 balloons}$

30. The coach of the field hockey team can spend at most $475 on new team uniforms. The coach will order the uniforms online and pay a mailing cost of $6.50. If each uniform costs $29, how many uniforms can the coach order?

Answers vary. Sample: $29u + 6.50 \leq 475; \text{At most 16 uniforms}$