

Algebra I (Section 2.2)

1. $14 + x = 17$

2. $n + 10 = 114$

3. $n - 12 = 20$

4. $10\left(\frac{1}{2}x + 6\right) = 8$

5. $\frac{2}{3}x + 4 = 7$

6. $m + 120 = 175$

7. $d + 90 = 350$

8. $2(2w) + 2w = 126$

9. $h + 2(h - 6) = 18$

10. $2l + 2(l - 4) = 72$

$h + 2h - 12 = 18$

$2l + 2l - 8 = 72$

$3h = 30$

$4l = 80$

$h = 10$

$l = 20$

Alice = 10 hr

Length = 20 m

Peter = 8 hr

Width = 16 m

11. $h + (h + 6) + 4(h + 6) = 126$

12. $h + 5(h + 2) = 20$

$h + h + 6 + 4h + 24 = 126$

$h + 5h + 10 = 20$

$6h + 30 = 126$

$6h + 10 = 20$

$6h = 96$

$6h = 10$

$h = 16$

$h = \frac{10}{6} = \frac{5}{3}$

Isaac = 16 hrs.

Brian = $\frac{5}{3}$ hours

Ruby = 22 hrs.

Annie = $18\frac{1}{3}$ hours

$$13. \quad 56 + 12m = 80 + 8m$$

$$4m = 24$$

$$m = 6$$

After 6 months they will each have 128 stamps.

$$14. \quad 2500 + 150m = 3000 + 125m$$

$$25m = 500$$

$$m = 20$$

After 20 months, the total amount paid will be \$5500.

$$15. \quad 50 + 55m = 200 + 45m$$

$$10m = 150$$

$$m = 15$$

After 15 months, the total amount paid to both girls is \$875.

$$16. \quad 200 + 10n = 100 + 30n$$

$$100 = 20n$$

$$n = 5$$

After 5 months, Tina will save \$250 using either option.

$$17. \quad 24,000 + 3,000n = 30,000 + 2,400n$$

$$600n = 6,000$$

$$n = 10 \text{ years}$$

$$18. \quad 30,000 + 2,400n = 36,000 + 2,000n$$

$$400n = 6,000$$

$$n = 15 \text{ years}$$

$$19. \quad \text{Paul: } 30,000 + 10(2,400) = 54,000$$

$$\text{Sharla: } 36,000 + 10(2,000) = 56,000$$

Sharla earned \$2,000 more after 10 years.

23. You need to find the length and width

24. Brittany wrote $20 - x$ instead of $x - 20$.