Short Answer

tip: - to convert %s to decimals, divide by 100 or move the decimal 2 places to the left
Eg 10% = 0.10.

① 10% of 17.95
0.10 × 17.95 = 1.795 (discount)

17.95 − 1.795 = $16.155

25% of 16.155 (new price)
0.25 × 16.155 = 4.03875 (discount)

16.155 − 4.03875 = $12.11625 final price.

tax = 5% 5% of 12.11625

0.05 × 12.11625 = 0.6058125 (tax)

total = 12.11625 + 0.6058125 = $12.72

② 15% off means you pay 85%

85% of 129.99
0.85 × 129.99 = $110.4915 } 1st discount.

35% off means you pay 65%

65% of $110.4915
0.65 × 110.4915 = $71.819475

tax = 7% + 5% = 12% so you pay 112% of 71.819475
1.12 × 71.819475 = $80.44

③ $32 \times 2 = 64$, $\sqrt{64} = 8$

↑ whole number ∴ Perfect Square

2 is the smallest number you can multiply 32 by to get a perfect square.

④ $18 \times 2 = 36$, $\sqrt{36} = 6$.

* tip: if you don't get it on 2, keep working your way up.

⑤ $y = 3x + 12$

* consider all coordinates are in the form (x, y)

a) $(x, -3)$ → $y = (-3)$ (x, y)

$$-3 = 3x + 12$$
$$-12 \qquad -12$$
$$\frac{-15}{3} = \frac{3x}{3}$$
$$-5 = x.$$

b) $(5, y)$: $x = 5$ (x, y)

$$y = 3(5) + 12$$
$$15 + 12$$
$$y = 27$$

(6) $-2(s+5) = 28$

distributive property.

$-2s - 10 = 28$

$+10 \quad +10$

$\frac{-2s}{-2} \quad \frac{38}{-2}$

$s = -19$

Solve.

$3(t-6) = -45$

$3t - 18 = -45$

$+18 \quad +18$

$\frac{3t}{3} \quad \frac{-27}{3}$

$t = -9$

(7) $c^2 = a^2 + b^2$

$= 32.43 + 46.28$

$c^2 = 78.71$

$a^2 = c^2 - b^2$

$= 87.32 - 23.53$

$a^2 = 63.79$