SAT Math Practice Module 2

22 mixed questions, easier to harder. Suggested time: 35 minutes

Name _____ Date _____

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1. What's 30% of 110?

2. A gym charges $C = 76 + 10m$. What does 76 mean?
   (A) Signup fee (B) Total cost (C) Number of months (D) Cost per month

3. $\frac{8}{5} = \frac{x}{40}$. Find x.

4. The point $(7, 5)$ is on $y = f(x)$. What's $f(7)$?

5. How many solutions: $y = 8x + 9$ and $y = 8x + 15$?
   (A) Two (B) None (C) Infinitely many (D) One

6. Solve $7x < 77$. What goes in $x < \square$?

7. Find the y-intercept of $y = x^2 + 4x - 6$.

8. $2x + 2y = 5$ and $4x + 4y = k$ has infinitely many solutions. Find k.

9. For what c does $x^2 + 4x + c = 0$ have exactly one solution?

10. $f(x) = 4x + k$ and $f(5) = 11$. Find k.

11. Find the sum of the solutions of $6x^2 - 24x + 6 = 0$.

12. A tank has 323 L and drains 13 L a minute. How long until it has 115 L, in minutes?

13. A \$600 item loses 20% yearly. What's it worth after 2 years, in dollars?

14. $3x + 4y = 7$ and $6x + ky = 15$ has no solution. Find k.

15. $4x + y = 15$ and $x + 4y = 15$. Find $x + y$.

16. Convert 108 km/h to m/s.

17. Density is 7 g/cm^3. What's the mass of a 2 cm cube, in grams?

18. A value doubles every 2 years. By what factor does it grow in 6 years?

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19. A coin jar has dimes and quarters, 28 coins worth \$4.45. How many quarters?

20. A margin of error is ±5%, around 36%. What's the highest plausible value, in %?

21. $f(x) = 5x - 16$. For what x does $f(x) = x$?

22. $y = 3x + 3$. If x increases by 8, by how much does y increase?

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SAT Math Practice Module 2: Answer Key

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1. 33

   0.3×110.

2. (A) Signup fee

   It's the cost when $m = 0$.

3. 64

   Scale by 8.

4. 5

   That's what the point means.

5. (B) None

   Same slope and different intercepts: parallel.

6. 11

   Divide by 7.

7. -6

   Set $x = 0$.

8. 10

   The second must be 2 times the first.

9. 4

   $4^2 - 4c = 0$.

10. -9

    $4(5) + k = 11$.

11. 4

    $-\dfrac{b}{a}$.

12. 16

    $115 = 323 - 13t$.

13. 384

    $600(0.8)^2$.

14. 8

    Multiply the first by 2: the y coefficient must match.

15. 6

    Add them, then divide by 5.

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16. 30

    Multiply by 1000, divide by 3600.

17. 56

    $V = 2^3$.

18. 8

    3 doublings.

19. 11

    $0.10d + 0.25q = 4.45$ and $d + q = 28$.

20. 41

    Add it.

21. 4

    $5x - 16 = x$.

22. 24

    The increase is slope times the change.

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