

1. Simplify. $-32 - 8 \div 4 - (-2)$
 a) -36 b) -32 c) -12 d) -8
2. Simplify. $5^2 + 6 \cdot 7 - (16 + 25 \cdot 3)$
 a) 126 b) 94 c) -24 d) -58
3. Simplify. $|3 - 5|^2 - |7 - 13|$
 a) -4 b) -2 c) 8 d) 10
4. Simplify. $[4(9x - 6y) + 11] - [14x - (6y + 4)]$
 a) $22x - 18y + 15$ b) $22x - 18y + 7$ c) $22x - 30y + 15$ d) $22x - 30y + 7$
5. Evaluate $x^3y^2 + xy + 2xy^2$ for $x = -1$ and $y = 2$
 a) -14 b) -10 c) 10 d) 14
6. Solve. $5(t + 3) + 9 = 3(t - 2) + 6$
 a) 12 b) 4 c) -4 d) -12
7. Solve. $\frac{2}{3} + \frac{1}{4}x = \frac{1}{3}$
 a) $-\frac{4}{3}$ b) $\frac{4}{11}$ c) $\frac{4}{3}$ d) 4
8. Solve $Ax + By = C$ for x
 a) $x = \frac{B}{A}y + \frac{C}{A}$ b) $x = \frac{B}{A}y - \frac{C}{A}$ c) $x = -\frac{B}{A}y + \frac{C}{A}$ d) $x = C - By - A$
9. Translate the problem into mathematical language. You need not actually solve the problem.
 After a 40% reduction, a shirt is on sale for \$34.80. What was the original price of the shirt?
 a) $.40x = 34.80$ b) $34.80x = .40$ c) $.60x = 34.80$ d) $34.80x = .60$
10. A car and a truck start from the same place in Orlando. The car travels at 65 mph and the truck travels at 50 mph. In how many hours will they be 75 miles apart?
 a) 5 hr b) 2 hr c) $1\frac{8}{23}$ hr d) $\frac{15}{23}$ hr

11. Identify the proportion listed below that solves this problem.

The coffee beans from 14 trees are required to produce 7.7 kg of coffee. How many trees are required to produce 320 kg of coffee?

a) $\frac{7.7}{320} = \frac{14}{x}$

b) $\frac{7.7}{320} = \frac{x}{14}$

c) $\frac{14}{x} = \frac{320}{7.7}$

d) $\frac{7.7}{14} = \frac{x}{320}$

12. Simplify.

$$\left(\frac{r^2s^3}{r^4s^2}\right)^3$$

a) $\frac{r^6}{s}$

b) $\frac{r^6}{s^3}$

c) $\frac{s^3}{r^6}$

d) $\frac{s}{r^6}$

13. Simplify.

$$\frac{(-3x^2y^2)^{-2}}{(xyz)^{-2}}$$

a) $-\frac{z^2}{9x^2y^2}$

b) $\frac{z^2}{9x^2y^2}$

c) $\frac{9x^2y^2}{z^2}$

d) $9x^2y^2z^2$

14. Simplify.

$$\frac{(a^4b^{-7})^0}{(a^2b^{-1})^{-5}}$$

a) a^3b^6

b) $\frac{a^{10}}{b^5}$

c) $\frac{b^5}{a^{10}}$

d) $\frac{1}{a^{10}b^5}$

15. Write 9.07×10^{10} in standard notation.

a) 0.0000000000907

b) 9,700,000,000

c) 90,700,000,000

d) 9,070,000,000,000

16. Subtract.

$$(6x^2 + 3x - 1) - (4x^2 - 3x + 3)$$

a) $2x^2 + 6x + 2$

b) $2x^2 + 6x - 4$

c) $2x^2 + 2$

d) $2x^2 - 6x - 4$

17. Multiply.

$$-9x^6(11x^7 + 8x^3)$$

a) $-171x^{16}$

b) $-99x^{13} - 72x^9$

c) $-99x^{13} + 8x^3$

d) $16x^{36} + 24x^{30}$

18. Multiply.

$$(x - 3y)(x + 8y)$$

a) $x^2 + 5xy + 5y^2$

b) $x^2 + 5xy - 24y^2$

c) $x^2 + 2xy - 24y^2$

d) $x^2 - 5xy - 24y^2$

19. Factor completely.

$$-9w^6x^5 - 27w^5x^6 + 3w^5x^7 - 6w^3x^6$$

a) $w^3x^5(-9w^3 - 27w^2x + 3w^2x^2 - 6x)$

b) $-3w^3x^5(3w^3 + 9w^2x - w^2x^2 + 2x)$

c) $-3wx^5(3w^5 + 9w^4x - w^4x^2 + 2w^2x)$

d) $-w^3x^5(9w^3 + 27w^2x - 3w^2x^2 + 6x)$

20. Factor completely.

$$169a^2 - 81b^2$$

a) $(169a + b)(a - 81b)$

b) $(13a + 9b)(13a - 9b)$

c) $(13a + 9b)^2$

d) $(13a - 9b)^2$

21. Factor completely.

$$x^3 + 8x^2 - 3x - 24$$

a) $(x^2 + 3)(x - 8)$

b) $(x - 3)(x + 1)(x + 8)$

c) $(x^2 + 8)(x - 3)$

d) $(x^2 - 3)(x + 8)$

22. Identify a factor of the following trinomial:

$$8x^2 - 14xy - 15y^2$$

a) $(2x + 3y)$

b) $(4x - 3y)$

c) $(4x - 5y)$

d) $(2x - 5y)$

23. Simplify.

$$\frac{y^2 - 3y - 54}{y^2 - 2y - 63}$$

a) $\frac{(y - 2)(y + 5)}{(y + 2)(y - 9)}$

b) $\frac{3y - 6}{y - 7}$

c) $\frac{y + 6}{y + 7}$

d) $\frac{y - 5}{y - 9}$

24. Solve.

$$x^2 + 6x - 16 = 0$$

a) 8, 2

b) 8, -2

c) -8, 2

d) -8, -2

25. Solve.

$$10b^2 + 19b + 6 = 0$$

a) $-\frac{3}{2}, -\frac{2}{5}$

b) $-\frac{2}{3}, -\frac{2}{5}$

c) $-\frac{3}{2}, \frac{2}{5}$

d) $\frac{2}{3}, \frac{5}{2}$

26. Simplify.

$$\sqrt{50x^3y^5z^4}$$

a) $xy^2z^8\sqrt{50xy}$

b) $25x^3y^4z^4\sqrt{2xy}$

c) $5xy^2z^8\sqrt{2xy}$

d) $5xy^2z^4\sqrt{2xy}$

27. Simplify.

$$2\sqrt{3}(\sqrt{5} + \sqrt{4})$$

a) $2\sqrt{8} + \sqrt{3}$

b) $18\sqrt{2}$

c) $2\sqrt{15} + 4\sqrt{3}$

d) $2\sqrt{15} + 8\sqrt{3}$

28. Solve.

$$-6(7a - 5) \leq -6(6a - 7)$$

a) $a \leq 2$

b) $a \geq 2$

c) $a \geq -2$

d) $a \leq -2$

29. Find the y-intercept for: $-3x + 3y = -3$

a) $(-1, 0)$

b) $(0, -1)$

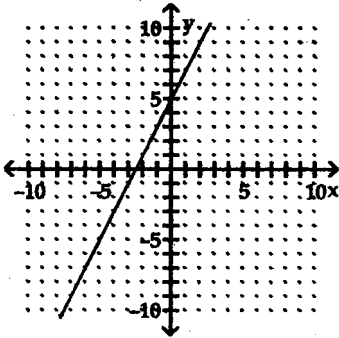
c) $(0, 1)$

d) $(1, 0)$

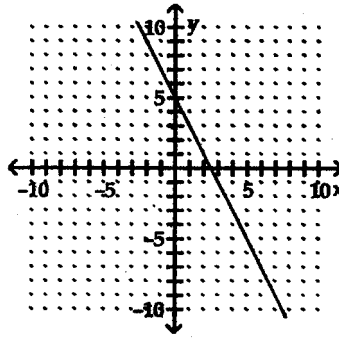
30. Find the graph that best matches the given linear equation.

$$y = -2x + 5$$

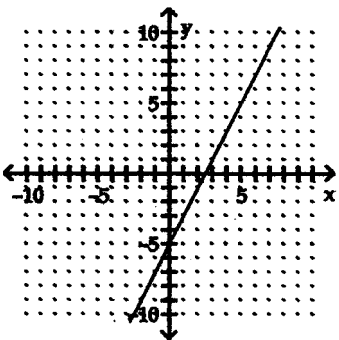
a)



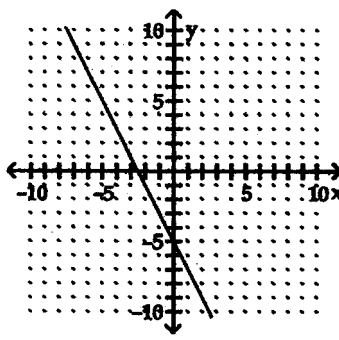
b)



c)



d)



Answer Key

Testname: WSPRACCOMP2

1. b
2. c
3. b
4. a
5. a
6. d
7. a
8. c
9. c
10. ~~a~~ d
11. a
12. c
13. b
14. b
15. c
16. b
17. b
18. b
19. b
20. b
21. d
22. d
23. c
24. c
25. a
26. c
27. c
28. c
29. b
30. b