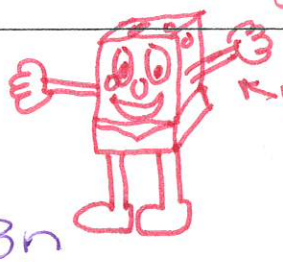
Secret ~~word~~ Phrase: I'm ready! I'm ready! I'm ready! write 1x for RC

Name _____ Date _____




Answers

# Chapter 3 Practice Test

**Simplify the following expressions.**

1. $m + 3n + 6m$ — $6m+m+3n$, $7m+3n$ — 1. $7m+3n$
2. $-2t + 3t^2 - 10 - 14t$ — $3t^2-2t-14t-10$, $3t^2-16t-10$ — 2. $3t^2-16t-10$
3. $5x^2 + 7x - 3 + 10x^2 - 5x - 20$ — $5x^2+10x^2+7x-5x-3-20$, $x^2-2x-23$ — 3. $15x^2-2x-23$
4. 5 — 4. 5

**Find the sum or difference.**

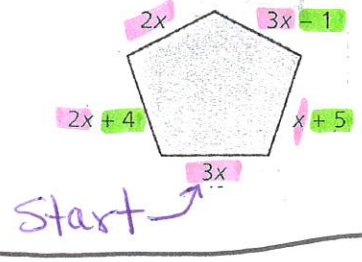
4. $(3 - 7m) + 2(3.5m + 1)$ — $3-7m+2(3.5m)+2(1)$, $+3-7m+7m+2$, $-7m+7m+3+2$, $0+5 \Rightarrow 5$
5. $(4a - 5) - 8(-2.5a + 3)$ — $4a-5-8(-2.5a)-8(3)$, $4a-5+20a-24$, $4a+20a-5-24$, $24a-29$

5. $24a-29$

6. $\frac{2.6x + 23.4}{2.6} \quad \frac{}{2.6}$ — $2.6\overline{)23.4}$, $234$, $0$, $2.6(x+9)$ — 6. $2.6(x+9)$
7. $\left(-\frac{3}{5}k\right) - \frac{3}{10}$ — $-\frac{5}{3}\cdot\left(\frac{3}{5}\right)k - \frac{3}{10}\cdot\left(-\frac{5}{3}\right)$, $-\frac{3}{5}\left(k+\frac{1}{2}\right)$ — 7. $-\frac{3}{5}\left(k+\frac{1}{2}\right)$

**Factor out the coefficient of the variable.**

8. Write an expression that represents the perimeter of the polygon.




sum of all sides

$3x+2x+4+2x+3x-1+x+5$

$3x+2x+2x+3x+x+4-1+5$

$11x+8$ — 8. $11x+8$

9. $y=2$

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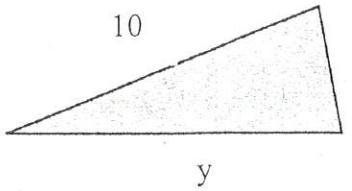
9. The perimeter (in meters) of the triangle is 15 ft. **Write an ~~expression~~ equation** in simplest form that represents the measure of the third side, then SOLVE.




$10+3+y=15$

$13+y=15$

$-13 \quad -13$

$y=2$

**Solve the equation. Check your solution.**

10. $y + 14.6 = -31.75$

$-14.6 \quad -14.60$ ADD

$-31.75$
$-14.60$
$-46.35$

$\boxed{y = -46.35}$

11. $m - \frac{5}{8} = -\frac{1}{4} + \frac{5}{8}$

$+\frac{5}{8}$

$m = -\frac{2}{8} + \frac{5}{8}$ SUBTRACT

$\boxed{m = \frac{3}{8}}$

$-\frac{1}{4} \cdot \frac{2}{2} = -\frac{2}{8}$

12. $\frac{x}{6.2} = -2.1$

$\frac{\cancel{6.2}\,x}{1\,\cancel{6.2}} = -2.1(6.2)$

$6.2 \times 2.1$: $62$, $1240$, $1302$

$\boxed{x = -13.02}$

13. $\frac{-18v}{-18} = \frac{-414}{-18}$

$\boxed{v = +23}$

$18\overline{)414}$ $\times 23$: $-36$, $54$, $54$, $0$

**Find the value(s) of *x*.**

14. $5x - 8x = 15$

$\frac{\cancel{-3}\,3x}{\cancel{-3}} = \frac{15}{-3}$

$\boxed{x = -5}$

15. $3(x + 1) = -24$

$3 \cdot x + 3 \cdot 1 = -24$

$3x + 3 = -24$

$-3 \quad -3$

$\frac{\cancel{3}x}{\cancel{3}} = \frac{-27}{3}$

$\boxed{x = -9}$

16. $\frac{2}{3}y + 5 = 25$

$-5 \quad -5$

$\frac{\cancel{3}}{\cancel{2}} \cdot \frac{\cancel{2}}{\cancel{3}}y = \frac{\cancel{20}^{10}}{1} \cdot \frac{3}{\cancel{2}_1}$

$\boxed{y = 30}$

17. $3.4n - 5 = 5.2$

$+5 \quad +5$

$\frac{\cancel{3.4}n}{\cancel{3.4}} = \frac{10.2}{3.4}$

$\boxed{n = 3}$

$3.4\overline{)10.2}$ $\times 3$: $102$, $0$

**Write the word sentence as an equation. Then solve.**

18. The sum of a number *a* and negative 12 is 6.

$a + (-12) = 6$

$\boxed{a - 12 = 6}$

$a + (-12) = 6$

$+12 \quad +12$

$\boxed{a = 18}$

19. 45 equals the quotient of a number *n* and 3.

divide

$\boxed{45 = \frac{n}{3}}$

$3(45) = \frac{n}{3} \cdot \frac{3}{1}$

$\boxed{135 = n}$

20. The difference of 2.1 and twice a number *p* is negative 4.7.

subtract

$\boxed{2.1 - 2p = -4.7}$

$2.1 - 2p = -4.7$

$-2.1 \quad -2.1$

$\frac{-2p}{-2} = \frac{-6.8}{-2}$

$\boxed{p = 3.4}$

21. 40 less than a number g is 12

subtract from

$\boxed{g - 40 = 12}$

$\boxed{\text{NOT } 40 - g}$

$g - 40 = 12$

$+40 \quad +40$

$\boxed{g = 52}$

22. Litter cleanup volunteers form 4 groups containing *v* volunteers each. Then 10 more volunteers show up. The volunteers regroup into 5 groups each containing 6 people. How many volunteers were in each original group?

4 group of v volunteers = 4v

10 more = +10

5 groups of 6 people = 5(6)

$4v + 10 = 5(6)$

$4v + 10 = 30$

$-10 \quad -10$

$\frac{4v}{4} = \frac{20}{4}$

$\boxed{v = 5}$

**Answers**

10. $y = -46.35$

11. $m = \frac{3}{8}$

12. $x = -13.02$

13. $v = +23$

14. $x = -5$

15. $x = -9$

16. $y = 30$

17. $n = 3$

18. $a - 12 = 6$

$a = 18$

19. $45 = \frac{n}{3}$

$135 = n$

20. $2.1 - 2p = -4.7$

$p = 3.4$

21. $g - 40 = 12$

$g = 52$

22. $4v + 10 = 5(6)$

$v = 5$ volunteers in each of the original 4 groups.