

Review Sheet up to Lesson 64
Algebra 1 Accelerated

Name: _____

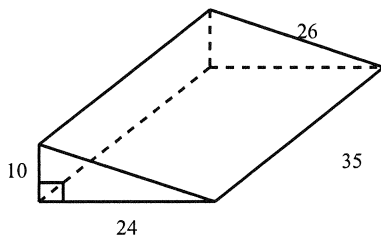
SHOW YOUR WORK

1. Graph the following inequality on a number line: $x - 1 \geq -2$; $D = \{\text{Real numbers}\}$
2. Graph the following inequality on a number line: $x - 3 \geq 2$; $D = \{\text{Real numbers}\}$
3. Indicate whether each of the following numbers is a rational or an irrational number.
(a) -2 (b) $\frac{2}{3}$ (c) $2\sqrt{3}$ (d) $\sqrt{2+4}$

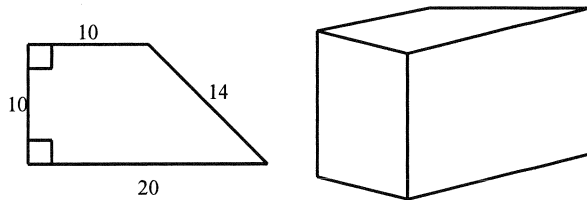
Simplify:

4. $\sqrt{40}$
5. $\sqrt{12}$
6. Evaluate: $4^2 - 5^2 \pm \sqrt{25}$
7. $\sqrt{23}$ is between what two consecutive whole numbers?
8. Evaluate. Do not use a calculator. $\sqrt{25} - \sqrt{64} - \sqrt{81} - \sqrt{144}$
9. (a) $-2\sqrt[3]{8} \in \{\text{What subsets of the real numbers}\}$? (b) $3\sqrt{2} \in \{\text{What subsets of the real numbers}\}$?
10. Tell whether each of the following statements is true or false:
(a) $\{\text{Rationals}\} \subset \{\text{Naturals}\}$ (b) $\{\text{Irrationals}\} \subset \{\text{Reals}\}$
11. Tell whether each of the following statements is true or false:
(a) $\{\text{Rationals}\} \subset \{\text{Reals}\}$ (b) $\{\text{Naturals}\} \subset \{\text{Integers}\}$
12. Given the sets $A = \{10, 11, 12\}$, $B = \{9, 10, 11, 12, \dots\}$, and $C = \{9, 10, 11\}$, tell which of the following statements are true and which are false.
a) $A \subset B$ b) $A \not\subset C$ c) $14 \in B$ d) $C \subset B$

13. Find the volume and the total surface area of the right triangular prism. Dimensions are in meters.



14. A base of a right prism whose height is 8 meters is the trapezoid shown. Find the surface area of the prism. Dimensions are in meters.



15. Solve the system by substitution:

$$5x + y = 23$$

$$6x + y = 28$$

16. Solve the system by substitution:

$$-5x + y = -32$$

$$2x - 8y = 66$$

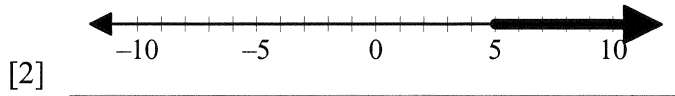
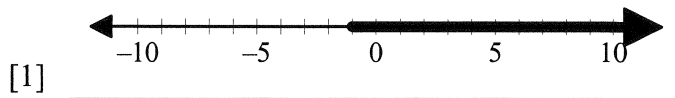
17. The number of bacteria increased by 335 percent overnight. If there were 25,000 bacteria yesterday, how many bacteria were present this morning?

18. The experimental treatment caused side effects in 35% of those who had it. If 910 experienced side effects, how many people had the experimental treatment?

19. Add. Write the answer with all exponents positive. $xy^{-3}z^2 + w^{-1}y^{-2}z$

20. Simplify: $\frac{\frac{f}{d}}{\frac{e}{d+f}}$

21. The average of the first 6 weights was 26 pounds. The average of the next 8 weights was 32 pounds. The average of the last 6 weights was 38 pounds. What was the overall average of the weights?
22. Graph: $y = x + 1$
23. Multiply: $(5x + 2)(2x - 9)$
24. Erin had 9 bags of dried lavender for the craft show. She weighed the bags and found their weights (in ounces) to be 9, 4, 11, 5, 14, 14, 10, 14, and 9. Find the range, mean, median, and mode of their weights.
25. $1\frac{2}{15}$ of what number is $1\frac{2}{21}$?



[3] (a) rational (b) rational (c) irrational (d) irrational

[4] $2\sqrt{10}$

[5] $2\sqrt{3}$

[6] -14, -4

[7] 4 and 5

[8] -24

(a) rational, integers
 [9] (b) irrational

(a) false
 [10] (b) true

(a) true
 [11] (b) true

[12] a) true b) true c) true d) true

[13] 4200 m^3 and 2340 m^2

[14] 732 m^2

[15] (5, -2)

[16] (5, -7)

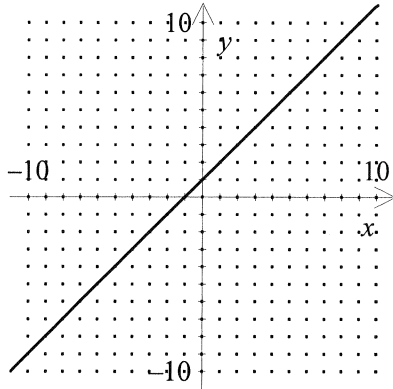
[17] 108,750

[18] 2600

[19] $\frac{wxz^2 + yz}{wy^3}$

[20] $\frac{fd + f^2}{de}$

[21] 32 pounds



[22]

[23] $10x^2 - 41x - 18$

[24] range = 10, mean = 10, median = 10, and mode = 14

[25] $\frac{115}{119}$
