

Benchmark Test - Second Quarter (Chapters 3-5)

Indicate the answer choice that best completes the statement or answers the question.

1. Which two points represent integers with the same absolute value?



- a. points V and U
b. points F and P
c. points T and A
d. points F and N
2. How is the fraction $\frac{19}{30}$ written as a decimal?
- a. 0.63
b. $0.6\bar{3}$
c. $0.\bar{63}$
d. $0.06\bar{3}$
3. Suppose a submarine is diving from the surface of the water at a rate of 80 feet per minute. Which integer represents the depth of the submarine after 7 minutes?
- a. 80
b. 560
c. -80
d. -560
4. What is the simplified form of the algebraic expression shown below?

$$7w - 6 - 3w + 5$$

- a. $4w - 1$
b. $w + 2$
c. $w - 1$
d. $4w - 6$

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5. Which expression is equivalent to the algebraic expression below?

$$-4(3x - 5)$$

- a. $-x - 5$
- b. $-x - 9$
- c. $-12x + 20$
- d. $-12x - 5$

6. Suppose a 24-acre plot of land is being divided into $\frac{1}{3}$ -acre lots for a housing development. How many lots will there be in the development?

- a. 8 lots
- b. 27 lots
- c. 56 lots
- d. 72 lots

7. Which property is illustrated by the equation below?

$$\frac{5}{6} \times \frac{6}{5} = 1$$

- a. Additive Inverse Property
- b. Distributive Property
- c. Associative Property of Multiplication
- d. Multiplicative Inverse Property

8. Which of the following shows the rational numbers in order from least to greatest?

- a. 58%, $0.\overline{62}$, $\frac{31}{50}$
- b. $0.\overline{62}$, $\frac{31}{50}$, 58%
- c. 58%, $\frac{31}{50}$, $0.\overline{62}$
- d. $\frac{31}{50}$, 58%, $0.\overline{62}$

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9. Which of the following rational numbers is equivalent to a terminating decimal?

a. $\frac{17}{20}$

b. $\frac{17}{22}$

c. $\frac{17}{24}$

d. $\frac{17}{26}$

10. Jacob is $5\frac{5}{6}$ feet tall. Linda is $5\frac{1}{4}$ feet tall. How much taller is Jacob?

a. $\frac{1}{3}$ ft

b. $\frac{7}{12}$ ft

c. $\frac{3}{4}$ ft

d. $1\frac{1}{9}$ ft

11. Which of the following linear expressions cannot be factored?

a. $15x - 10$

b. $4x + 8$

c. $3x + 8$

d. $2x - 2$

12. The thickness of a CD is about $\frac{1}{20}$ inch. If Carrie has a stack of 52 CDs, what is the height of the stack?

a. $2\frac{3}{5}$ in.

b. $2\frac{1}{2}$ in.

c. $\frac{5}{13}$ in.

d. $\frac{1}{10}$ in.

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13. What is the next number in the pattern?

2,916, -972, 324, -108, 36, ...

- a. -18
- b. -12
- c. 12
- d. 18

14. Which of the following number sentences represents the model?



- a. $\frac{2}{5} \times \frac{2}{3} = \frac{4}{15}$
- b. $\frac{3}{4} \times \frac{1}{3} = \frac{1}{4}$
- c. $\frac{2}{3} \times \frac{1}{5} = \frac{2}{15}$
- d. $\frac{2}{5} \times \frac{1}{3} = \frac{2}{15}$

15. What is the quotient of the division problem?

$$\frac{-44}{4}$$

- a. -11
- b. -4
- c. 4
- d. 11

16. Which of the following represents the expression below simplified?

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

- a. $-2x + 2$
- b. $-2x + 3$
- c. $-2x - 1$
- d. $3x - 3$

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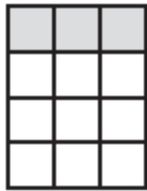
17. Angela painted $\frac{3}{8}$ of a room. Todd painted $\frac{2}{5}$ of the same room. What part of the room has been painted?

- a. $\frac{1}{40}$
- b. $\frac{5}{13}$
- c. $\frac{31}{40}$
- d. $\frac{15}{16}$

18. What is the result when the expression $(6x - 3)$ is subtracted from $(-3x + 2)$?

- a. $9x - 5$
- b. $-9x + 5$
- c. $3x - 1$
- d. $-3x + 1$

19. The models below represent the portion of a pizza that Reggie and Edgar have each eaten.



Reggie



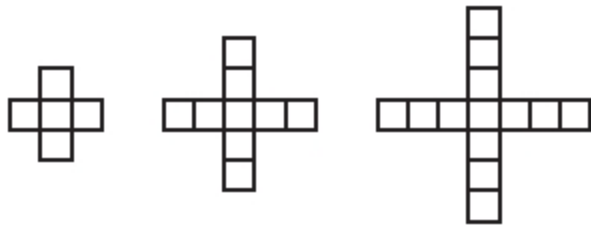
Edgar

How much more of the pizza has Edgar eaten than Reggie?

- a. $\frac{2}{3}$
- b. $\frac{1}{4}$
- c. $\frac{1}{6}$
- d. $\frac{1}{12}$

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20. Overnight the low temperature dropped to -6 degrees Fahrenheit. If the high temperature during the day was 11 degrees Fahrenheit, what was the difference between the high and low temperatures?
- 5°F
 - 17°F
 - -5°F
 - -17°F
21. **SHORT ANSWER** Danielle owes her brother \$40. She pays him \$25. Write an integer to represent how much she still owes her brother. Explain how you solved.
22. **SHORT ANSWER** Does the pattern below represent an arithmetic sequence? Explain your reasoning.



23. **SHORT ANSWER** The table shows Elizabeth’s scores for 9 holes of golf. Add the numbers in the middle column to find her total score for 9 holes. Add the integers in the third column to find her total score relative to par.

Hole	Score	Relative to Par
1	4	0
2	5	+1
3	3	0
4	4	0
5	7	+2
6	5	+1
7	4	0
8	5	+1
9	2	-1
Totals	?	?

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24. **SHORT ANSWER** James is using properties of real numbers to prove that $3(-1) = -3$. Identify the missing properties from his proof.

Statements	Properties
$3(0) = 0$	Multiplicative Property of Zero
$3[(-1) + 1] = 0$	a.
$3(-1) + 3(1) = 0$	b.
$3(-1) + 3 = 0$	c.
$3(-1) = -3$	d.

25. **SHORT ANSWER** Write the next three terms of the arithmetic sequence below.

1, 9, 17, 25, 33, ...