

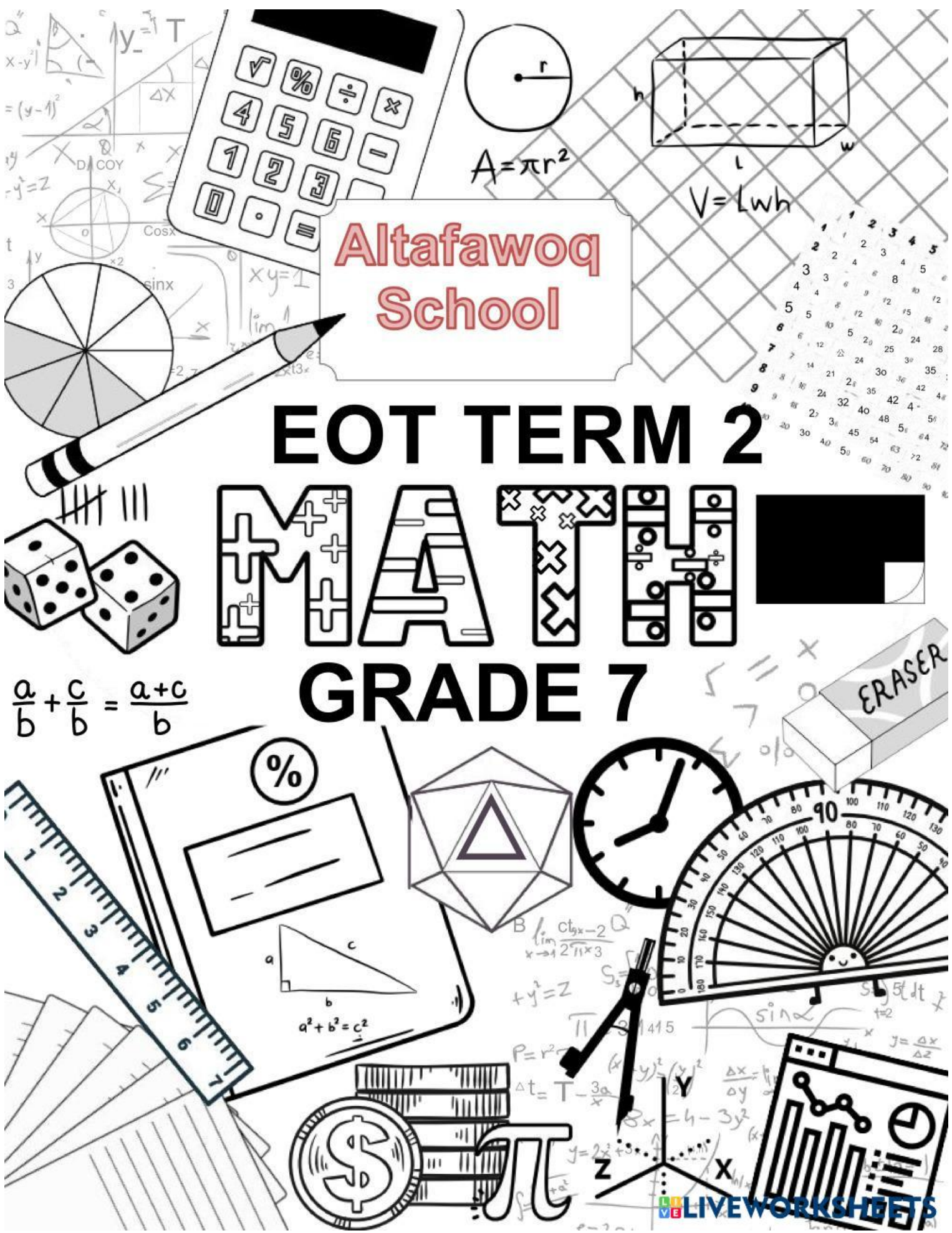
Altawoq
School

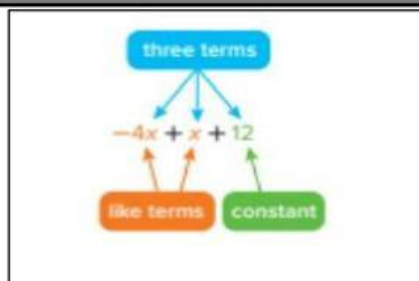
EOT TERM 2

MATH

GRADE 7

$$\frac{a}{b} + \frac{c}{b} = \frac{a+c}{b}$$





QUESTION 1

Sort the terms by writing like terms in the appropriate bins.

5 $8x$ $-9x^2$ $6x$ -12 $30x^2$ $-1.5x$ $\frac{1}{2}$

$4x^2$	$-2x$	3
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QUESTION 2

The cost of a jacket j after a 5% markup can be represented by the expression $j + 0.05j$.

Simplify the expression.

$$j + 0.05j =$$

QUESTION 3

The cost of a new pair of shoes after a 3% markup can be represented by the expression $c + 0.03c$. Simplify the expression.

QUESTION 4

Simplify $-5x + y + 6 - 5y - 3$.

Simplify $-5 - 3w + 9 - 6z + 8w - 4z$.

- (A) $4 - 9w + 4z$
- (B) $4 + 5w - 10z$
- (C) $4 + 5w + 10z$
- (D) $-4 - 5w - 10z$

QUESTION 5

QUESTION 6

1. $(8x + 9) + (-6x - 2)$

2. $(5x + 4) + (-8x - 2)$

3. $(-7x + 1) + (4x - 5)$

QUESTION 7

Find the additive inverse of $5x - 7$.

To find the additive inverse, multiply the expression by -1 .

QUESTION 8

Find the additive inverse of $-7x + 3$.

QUESTION 9

Find the GCF of $12y$ and $30y$.

QUESTION 10

Find the GCF of each pair of monomials. (Example 1)

1. $4y$, $12y$

2. $48x$, $32x$

3. $16mn$, $24m$

QUESTION 11

Factor each expression. If the expression cannot be factored, write *cannot be factored*. (Examples 3–5)

7. $5x + 35$

8. $8x - 14$

9. $3x + 11y$

QUESTION 12

Simplify each expression. For Exercises 1–4 and 9–12, write your answer in factored form. (Examples 1–3)

1. $3(x + 4) + 5x$

2. $-4(x + 1) + 6x$

3. $-5(2x - 6) + 25x$

4. $2(-8x - 3) + 18x$

5. $\frac{1}{6}x + \frac{3}{4}\left(\frac{1}{2}x - 4\right)$

6. $\frac{2}{3}\left(6x - \frac{1}{6}\right) + 3x$

QUESTION 13

Solve each equation. Check your solution. (Examples 1–7)

1. $6 + y = -8$

2. $-12 = 4 + c$

3. $p - 11 = -5$

4. $12 = z - 8$

5. $-7x = 56$

6. $-20 = -5b$

7. $\frac{d}{-9} = -6$

8. $15 = \frac{z}{-8}$

9. $2\frac{4}{5}x = -1\frac{1}{4}$

QUESTION 14

Solve each equation. Check your solution. (Examples 1–4)

1. $5x + 2 = 17$

2. $19 = 4x + 3$

3. $-18 = 6 + 6x$

QUESTION 15

A)

Write and solve an equation to determine the stingray's initial depth.

Part A Write an equation.

The initial depth plus $5\frac{1}{2}$ feet equals $-14\frac{5}{6}$ feet.

B).

The table shows the balance of Rob's checking account at the end of the day. This is \$95.50 less than the amount he had at the beginning of the day. Write and solve an equation to determine the balance at the beginning of the day. (Example 8)

Time	Balance (\$)
Start of Day	?
End of Day	4.50

C)

At the end of the week, Madison had $-\$55.98$ in her checking account. This is $\$202.64$ less than the amount she had at the beginning of the week.

Part A

Which equation can be used to determine the amount of money m Madison had at the beginning of the week?

☐ A $-55.98 = m - 202.64$

Part B

☐ B $-55.98 = m + 202.64$

How much money did Madison have at the beginning of the week?

☐ C $202.64 = m - 55.98$

☐ D $-202.64 = m - 55.98$

D)

2. An adult-sized basketball is 29.5 inches around. That is 2 inches bigger around than a youth-sized basketball, y .

E)

Amelia started with $\$54$, and spent $\$6$ each day at camp. She has $\$18$ left. Write and solve an equation to find how many days d Amelia was at camp.

Part A Which equation can be used to determine how many days d she was at camp?

☐ A $6 + 54d = 18$

☐ B $54 + 6d = 18$

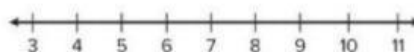
☐ C $6 - 54d = 18$

☐ D $54 - 6d = 18$

QUESTION 16

Solve $x + 3 > 10$. Check your solution. Then graph the solution set on a number line.

Part B Graph the solution set on a number line.

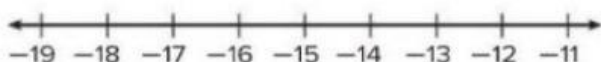


QUESTION 17

Solve $6 + h \leq -9$ and graph the solution set.

Part A Solve $6 + h \leq -9$.

Graph the solution set.

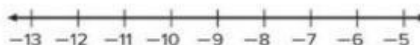


QUESTION 18

A)

Solve $0.4 + y \leq -9.6$. Check your solution. Then graph the solution set on a number line.

Part B Graph the solution set on a number line.

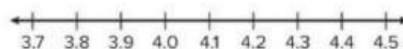


B)

Solve $x + 1.3 < 5.4$ and graph the solution set.

Part A Solve $x + 1.3 < 5.4$.

Part B Graph the solution set.



QUESTION 19

Write an addition inequality and a subtraction inequality that each have the solution set graphed below.



QUESTION 20

Write an equation that can be used to determine the value of the variable in each situation.

1. Today, Kevin jogged 12 minutes more than yesterday, y . He jogged 20 minutes today.

2. Mike has eighty-seven fewer dollars than Ashley, x . Mike has nineteen dollars.

3. Kellen practiced baseball for 25 more minutes today than yesterday, y . Today he practiced for 75 minutes.

1	2	3

QUESTION 21

Gabe went to the amusement park with \$40 to spend. His ticket cost \$26.50. Determine how much Gabe can spend on souvenirs and snacks. Then interpret the solution.

QUESTION 22

Peter can spend no more than \$100 on new clothes for school. He spends \$35 on a new pair of shoes. Shirts cost \$15.

Write and solve an inequality to determine how many shirts Peter can purchase. Then interpret the solution.

Part A Which inequality can be used to determine the number of shirts Peter can buy?

- (A) $35 + 15x \leq 100$
- (B) $35x + 15 \leq 100$
- (C) $35 + 15x \geq 100$
- (D) $35x + 15 \geq 100$

QUESTION 23

Meredith is given a \$50 monthly allowance to buy lunch at school. Any remaining money can be spent on entertainment. Meredith would like to have at least \$12 left at the end of the month to go to the movies with her friends. It costs Meredith \$2.50 per lunch that she buys at school.

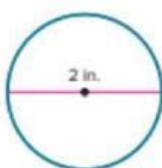
Write and solve an inequality to determine the number of lunches Meredith can buy and have at least \$12 left. Then interpret the solution.

Part A Write an inequality to determine the number of lunches Meredith can buy.

Part B Solve the inequality.

QUESTION 24

1. Find the circumference of the watch face.
Use 3.14 for π . Round to the nearest hundredth if necessary. (Example 1)



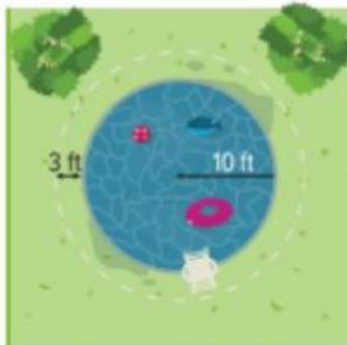
2. A circular fence is being used to surround a dog house. How much fencing is needed to build the fence? Use 3.14 for π . Round to the nearest hundredth if necessary. (Example 1)



- Find the circumference of a circle with a radius of $31\frac{1}{2}$ yards. Use 3.14 for π . Write your answer as a decimal rounded to the nearest hundredth. (Example 2)
- Find the circumference of a circle with a radius of 4.4 inches. Use 3.14 for π . Round to the nearest hundredth if necessary. (Example 2)

QUESTION 25

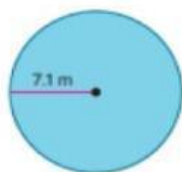
The Blackwells have a circular pool with a radius of 10 feet. They want to install a 3-foot wide sidewalk around the pool.



What will be the area of the sidewalk? Use 3.14 for π . Round to the nearest hundredth if necessary.

QUESTION 26

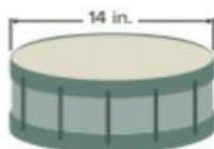
1. Find the area of the circle. Use 3.14 for π . Round to the nearest hundredth if necessary. (Example 1)



2. Find the area of the circle. Use 3.14 for π . Round to the nearest hundredth if necessary. (Example 1)



3. What is the area of the drumhead on the drum? Use 3.14 for π . Round to the nearest hundredth if necessary. (Example 2)



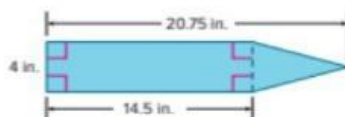
4. What is the area of one side of the penny? Use 3.14 for π . Round to the nearest hundredth if necessary. (Example 2)



QUESTION 27

Ayanna is painting a sign made from a piece of reclaimed wood with the dimensions shown.

What is the area of the sign?



Step 1 Decompose the figure into smaller figures.

The figure is a pentagon that is composed of a rectangle and a triangle.

Step 2 Find the area of each figure.

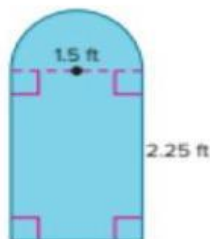
Complete the steps.

Find the area of the rectangle.	Find the area of the triangle.
$A = \ell \cdot w$	$A = \frac{1}{2}bh$
$= 14.5 \cdot 4$	$= \frac{1}{2} \cdot 4 \cdot 6.25$
$= \square$	$= \square$

QUESTION 28

Find the area of the figure. Use 3.14 for π . Round to the nearest hundredth if necessary.

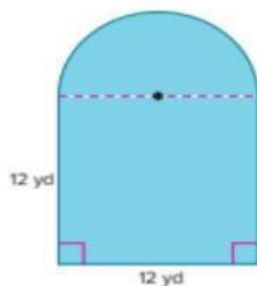
Show your work here



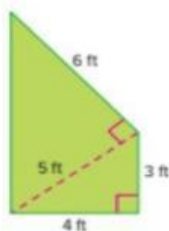
QUESTION 29

Find the area of each figure. If necessary, use 3.14 for π and round to the nearest hundredth. (Example 1)

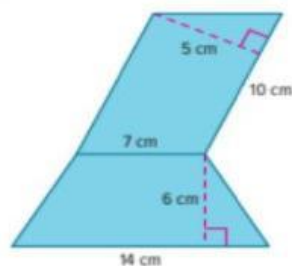
1.



2.



3.



QUESTION 30

The city of Wellington is commissioning a statue to honor their former mayor. The circular base of the statue will be 26 feet in diameter.

What is the area of the space needed to fit the base of the statue? Use 3.14 for π . Round to the nearest hundredth if necessary.

