TEAS Math Reference Guide

Formulas, conversions, objectives, and try-it questions for TEAS 7 Math review.

How to use this page: Review the essentials here, then practice beyond these try-it questions. The problems on this reference page are only a small sample of TEAS 7 Math. For full preparation, use the TEAS Math Workbook, TEAS Math QBank, Infinite QBank, and the free TEAS Math resources linked at the end of this reference guide and at www.bcraftmath.com/teasmath.

REFERENCE

Must-Know Conversions and Geometry Formulas

Quick reference for the conversions and geometry formulas that show up most often in TEAS 7 Math practice.

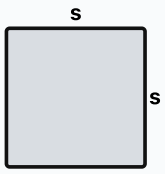
Must-Know Conversions

If a TEAS Math problem gives you a conversion, use the conversion in the problem. Not all common conversions are exact.

Conversion	Meaning
5 mL = 1 tsp	5 milliliters equals 1 teaspoon. Common in nursing, but an approximation. If a problem gives something like 4.93 mL = 1 tsp, use the given value.
1 L = 1000 mL	1 liter equals 1000 milliliters.
1 g = 1000 mg	1 gram equals 1000 milligrams.
1 kg = 1000 g	1 kilogram equals 1000 grams.
1 km = 1000 m	1 kilometer equals 1000 meters.
12 in = 1 ft	12 inches equals 1 foot.
3 ft = 1 yd	3 feet equals 1 yard.
36 in = 1 yd	36 inches equals 1 yard.
2.54 cm = 1 in	2.54 centimeters equals 1 inch.
16 oz = 1 lb	16 ounces equals 1 pound.
2.2 lb = 1 kg	2.2 pounds equals 1 kilogram. Common in nursing, but an approximation.

Geometry Formulas

Square



Area $A = s^2$

Perimeter $P = 4s$

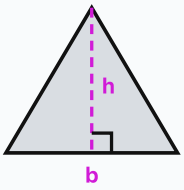
Rectangle



Area $A = lw$

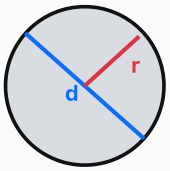
Perimeter $P = 2l + 2w$

Triangle



Area $A = \frac{1}{2}bh$

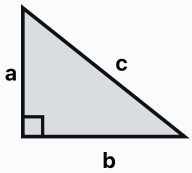
Circle



Area $A = \pi r^2$

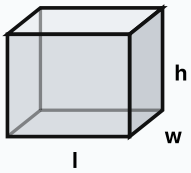
Circumference $C = \pi d$ or $C = 2\pi r$

Right Triangle



Pythagorean Theorem $a^2 + b^2 = c^2$

Rectangular Prism



Volume $V = lwh$

OBJECTIVE REFERENCE

TEAS 7 Math Objectives

Each objective below is formatted like a compact course module: a quick reference, then a few try-it questions with answers. This is still a reference, not a replacement for repeated practice.

M.1.1: Fractions, Decimals, and Percentages

Quick reference and practice for equivalent fraction, decimal, and percent forms.

QUICK REFERENCE

- Fractions, decimals, and percents are three different ways to write the same kind of value.
- Fraction to decimal: divide the top by the bottom (numerator divided by denominator).
- Decimal to percent: move the decimal two places to the right (same as multiplying by 100).
- Percent to fraction: put it over 100, then simplify.
- If you are comparing answers, change everything to the same form first. Decimals are often the easiest to compare. Think about money!
- Be careful with percents: 24% means 24 out of 100, not 24 as a regular number.

1. Convert $\frac{2}{5}$ to a decimal.

Answer: 0.4

Divide the numerator by the denominator: $2 \div 5 = 0.4$.

2. Convert 0.471 to a percentage.

Answer: 47.1%

Move the decimal two places to the right or multiply by 100: $0.471 \times 100 = 47.1\%$.

3. Convert 24% to a fraction in simplest form.

Answer: $\frac{6}{25}$

Drop the percent sign, write the number over 100, and simplify if possible: $24\% = \frac{24}{100} = \frac{6}{25}$.

RELATED VIDEO LESSON

Fractions, decimals, and percentages

SCAN FOR VIDEO WALKTHROUGH

www.youtube.com/watch?v=m_nnEYsEsRo&t=80s

Starts at 1:20. Review conversions between fractions, decimals, and percentages.

M.1.2: Order of Operations

Quick reference and practice for simplifying expressions in the correct order.

QUICK REFERENCE

- PEMDAS is a memory tool, but you still have to handle equal-priority operations from left to right.
- Do one operation at a time and rewrite the expression after each step.
- Parentheses or grouping symbols come first.
- Then handle exponents or square roots.
- Multiply and divide from left to right, then add and subtract from left to right.

- Be careful: multiplication does not always happen before division if division comes first from left to right.
- Same for addition and subtraction: do them in the order they appear from left to right.
- Watch signs when negatives are involved.

1. Evaluate: $9 + 6 \div 3 - 10$.

   Answer: 1

   Divide first, then add and subtract left to right: $9 + 2 - 10 = 1$.

2. Evaluate: $(24 - 17) \times (7^2 - 3^3) - 2^3$.

   Answer: 146

   Work inside parentheses:
   $(24 - 17) = 7$

   Evaluate exponents:
   $7^2 - 3^3 = 49 - 27 = 22$
   $2^3 = 8$

   Finish the expression:
   $7 \times 22 - 8 = 154 - 8 = 146$

RELATED VIDEO LESSON

Order of operations

SCAN FOR VIDEO WALKTHROUGH
www.youtube.com/watch?v=lxtTQbLlxDc

Work through grouping symbols and left-to-right multiplication, division, addition, and subtraction.

M.1.3: Putting Numbers in Order

Quick reference and practice for putting numbers in order.

QUICK REFERENCE

- Do not try to compare fractions, decimals, percents, and roots in mixed form.
- Change everything to a common form first. Decimals are usually the easiest. Think about money!
- Approximate square roots if they are not perfect squares. The calculator can help with this.
- For negative numbers, the value farther left on the number line is smaller.
- Check the direction: least to greatest is not the same as greatest to least.
- Increasing or Ascending order means from least to greatest.
- Decreasing or Descending order means from greatest to least.
- After ordering, make sure you answer using the forms given in the problem if possible.

1. Put these in increasing order: $\frac{1}{2}$, -2.78, 4, 8%, $\sqrt{3}$, -0.58, $\frac{1}{5}$.

   Answer: -2.78, -0.58, 8%, $\frac{1}{5}$, $\frac{1}{2}$, $\sqrt{3}$, 4

   Compare as decimals:
   $8\% = 0.08$
   $\frac{1}{5} = 0.2$
   $\frac{1}{2} = 0.5$
   $\sqrt{3} \approx 1.732$

   Then order from least to greatest.

2. Put these in order from greatest to least: 25%, 3, -2.78, $\frac{3}{4}$, $\sqrt{19}$, $\frac{2}{3}$, 3.96.

   Answer: $\sqrt{19}$, 3.96, 3, $\frac{3}{4}$, $\frac{2}{3}$, 25%, -2.78

   Compare as decimals:
   $\sqrt{19} \approx 4.359$
   $\frac{3}{4} = 0.75$
   $\frac{2}{3} \approx 0.667$
   $25\% = 0.25$

   Then order from greatest to least.

RELATED VIDEO LESSON

Putting fractions, decimals, and percentages in order



SCAN FOR VIDEO WALKTHROUGH

www.youtube.com/watch?v=Uc488ZzpDwI&t=18s

Starts at 0:18. Convert to decimals and think about money to compare positive and negative numbers. This example does not include square roots.

M.1.4: Equations and Algebra

Quick reference and practice for solving equations and simplifying algebraic expressions.

QUICK REFERENCE

- The goal is to get the variable by itself.
- Use inverse operations and do the same thing to both sides.
- If there are parentheses, distribute first.
- If variables are on both sides, move the variable terms to one side and the number terms to the other.
- Watch signs, especially when distributing a negative.
- Check your answer by plugging it back into the original equation.

1. Solve: $-7n - 1 = -29$.

   Answer: $n = 4$

   Add 1 to both sides to get $-7n = -28$. Divide by -7, so $n = 4$.

2. Solve: $-5(y+7)=5(y+6)$.

Answer: $y=-\frac{13}{2}$

Distribute first:
$-5(y+7)=5(y+6)$
$-5y-35=5y+30$

Subtract $5y$ from both sides:
$-10y-35=30$

Add 35 to both sides:
$-10y=65$

Divide by -10 and simplify:
$y=-\frac{13}{2}$

RELATED VIDEO LESSON

Solving multi-step equations

SCAN FOR VIDEO WALKTHROUGH

www.youtube.com/watch?v=uB8AbQd3BJc&t=7s

Starts at 0:07. Practice variables on both sides and distributing through parentheses, then check the solution.

M.1.5: Multi-Step Word Problems

Quick reference and practice for solving applied problems that require more than one step.

QUICK REFERENCE

- First ask: what is the problem actually asking me to find?
- Pull out the useful information and ignore extra information.
- Break multi-step problems into smaller steps instead of trying to solve everything at once.
- Label your work with units so you know what each number represents.
- Proportions may be helpful in solving some problems.
- Think about your answer. Does it make sense in the context of the problem?

1. Nine friends split an apple pie. One friend gets $\frac{1}{5}$ of the pie. The remaining friends equally divide what is left. What fraction of the pie does each remaining friend get?

Answer: $\frac{1}{10}$

Find how much pie is left:
$1-\frac{1}{5}=\frac{4}{5}$

The other 8 friends share the remaining pie:
$\frac{4}{5}\div 8=\frac{4}{5}\times\frac{1}{8}$
$\frac{4}{40}=\frac{1}{10}$

2. A shopper spent $\$17.97$ on fruit. The shopper bought 3 bags of oranges for $\$3.99$ per bag and 4 pounds of bananas. What was the price per pound of bananas?

Answer: $\$1.50$

Find the cost of the oranges:
$3 \times \$3.99 = \$11.97$

Subtract to find the cost of 4 pounds of bananas:
$\$17.97 - \$11.97 = \$6.00$

Divide by 4 pounds:
$\$6.00 \div 4 = \$1.50$ per pound

RELATED VIDEO LESSON

A multi-step sharing problem

SCAN FOR VIDEO WALKTHROUGH
www.youtube.com/watch?v=MN-IUu7POSk

Find the remaining part of a whole, then divide it among several people using a visual approach and fractions.

M.1.6: Percentage Word Problems

Quick reference and practice for percent setups and applied percent questions.

QUICK REFERENCE

- First decide what you are finding: the part, the whole, the percent, or the final total.
- For "percent of" problems, the fast way is to change the percent to a decimal and multiply.
- For percent problems, use $\frac{\text{part}}{\text{whole}} = \frac{\%}{100}$ or $\frac{\text{is}}{\text{of}} = \frac{\%}{100}$ to keep things organized.
- For 25%, put 25 over 100.
- For tips, taxes, discounts, increases, and decreases, be careful: the percent amount may not be the final answer.
- For percent increase or decrease, use: $\frac{\text{change in values}}{\text{original value}} \times 100\%$
- Always check whether the question wants the percent, the amount of change, or the new total.

1. What number is 140% of 108?

Answer: 151.2

Use $\frac{\text{is}}{\text{of}} = \frac{\%}{100}$.
Plug in the values:
$\frac{x}{108} = \frac{140}{100}$

Cross multiply and divide:
$x = 140 \times 108 \div 100 = 151.2$

2. If you leave a 20% tip for the waitress and your check is $\$37.59$, how much is the tip?

Answer: $\$7.52$

Convert 20% to 0.20, then multiply: $37.59 \times 0.20 = 7.518$, which rounds to $\$7.52$.

RELATED VIDEO LESSON

Percent problems with a proportion

SCAN FOR VIDEO WALKTHROUGH
www.youtube.com/watch?v=C1YCkS_0teg

Use is/of = %/100 to find the part, whole, or percentage. Place the unknown, then cross multiply and divide.

M.1.7: Rounding and Estimation

Quick reference and practice for rounding decimals and checking reasonableness.

QUICK REFERENCE

- Find the place you are rounding to first.
- Look one digit to the right.
- If that digit is 0 through 4, the rounding place stays the same.
- If that digit is 5 through 9, the rounding place goes up by 1.
- When rounding makes a 9 go up, carry into the digit to the left.
- Estimation is subjective, but in most cases you round to the highest place value, which means you look at the digit to the right of the leftmost digit to decide whether the leftmost digit stays the same or increases.
- Check whether the problem wants an exact answer, a rounded answer, or an estimate.

1. Round 14.23 to the nearest tenth.

Answer: 14.2

The hundredths digit is 3, so the tenths digit does not change.

2. Round 8.476 to the nearest hundredth.

Answer: 8.48

The thousandths digit is 6, so the hundredths digit rounds up from 7 to 8.

3. Round 607539.5264 to the nearest ones.

Answer: 607540

The ones digit is 9 and the tenths digit is 5, so round up. Since the ones digit is already 9, the rounding carries into the tens place.

RELATED VIDEO LESSON

Rounding and estimation

SCAN FOR VIDEO WALKTHROUGH
www.youtube.com/watch?v=fDN0m8fTTMI

Review place value, rounding decimals, carrying when a 9 rounds up, and estimating to check an answer.

M.1.8: Proportions and Dimensional Analysis

Quick reference and practice for proportions, unit conversions, and dimensional-analysis setups.

QUICK REFERENCE

- A proportion compares two equal ratios.
- The setup can look different, but the matching has to stay consistent.
- If the top is cups on one side, the top should match cups on the other side.
- If the left side is height over shadow, the other side should also be height over shadow.
- Once the proportion is set up, cross multiply and divide.
- Dimensional analysis is another way to organize units, especially when several conversions are chained together.
- Reread the question to ensure your answer makes sense in the context of the problem.

1. A mixing ratio calls for 5 ounces of concentrate per 8 gallons of water. If there are 16 gallons of water, how many ounces of concentrate are needed?

Answer: 10 ounces

Set up a proportion:

$$\frac{5 \text{ oz}}{8 \text{ gal}} = \frac{x}{16 \text{ gal}}$$

Cross multiply and divide:

$$x = 5 \times 16 \div 8$$

$$x = 10$$

2. A recipe uses $2\frac{1}{2}$ cups of flour to make 50 cookies. How many cups of flour are needed for 230 cookies?

Answer: 11.5 cups

Use $2\frac{1}{2} = 2.5$ in the proportion:

$$\frac{2.5 \text{ cups}}{50 \text{ cookies}} = \frac{x}{230 \text{ cookies}}$$

Cross multiply and divide:

$$x = 2.5 \times 230 \div 50$$

$$x = 11.5$$

RELATED VIDEO LESSON

Setting up a proportion

SCAN FOR VIDEO WALKTHROUGH
www.youtube.com/watch?v=gVq1oQIg9Is

Match the quantities in a height-and-shadow problem, then cross multiply and divide. Compare two valid setups.

M.1.9: Ratio and Rates Word Problems

Quick reference and practice for ratios, rates, and unit-rate applications.

QUICK REFERENCE

- A ratio compares two quantities, like boys to girls.
- Ratios can be written in multiple ways: $a : b$, $\frac{a}{b}$, or "a to b".
- A rate compares quantities with different units, like miles per hour.
- Keep the order straight. Boys to girls is not the same as girls to boys.
- If the ratio or rate is being scaled, set up a proportion.
- Cross multiply and divide to find the missing value.
- For distance problems, remember $d = rt$, but still check what the question is asking for.

1. In 3 hours, Harper can bike 48 miles. At this rate, how far will she bike in 4 hours?

Answer: 64 miles

Set up a proportion:
$\frac{48 \text{ miles}}{3 \text{ hours}} = \frac{x \text{ miles}}{4 \text{ hours}}$

Cross multiply and divide:
$x = 48 \times 4 \div 3$
$x = 64$

2. The ratio of boys to girls in a class is $3 : 5$. If there are 24 boys, how many girls are there?

Answer: 40 girls

Set up a proportion:
$\frac{3 \text{ boys}}{5 \text{ girls}} = \frac{24 \text{ boys}}{g \text{ girls}}$

Cross multiply and divide:
$g = 24 \times 5 \div 3$
$g = 40$

RELATED VIDEO LESSON

Ratios, rates, and unit rates

SCAN FOR VIDEO WALKTHROUGH

www.youtube.com/watch?v=sVxz63QvuwI&t=80s

Starts at 1:20. Compare groups with ratios and use unit rates for prices, distance, and time.

M.1.10: Translating Word Problems

Quick reference and practice for translating phrases into math.

QUICK REFERENCE

- Define the variable before writing the expression, equation, or inequality.
- Translate one phrase at a time.
- Watch words like sum, difference, product, quotient, twice, more than, and less than.
- Be extra careful with "less than" and "subtracted from" because the order can flip.
- Expressions do not have an equals or inequality symbol. Equations (=) and inequalities (>, <, ≥, ≤) do.
- After solving, answer in the context of the problem.

1. Translate this phrase into an expression: the sum of twice a number and 9.

Answer: $2x + 9$

Twice a number is $2x$. The sum of that and 9 is $2x + 9$.

2. The length of a rectangle is 4 less than 9 times the width, w. Which expression represents the perimeter in terms of w?

A. $20w - 8$
B. $9w - 4$
C. $18w - 8$
D. $20w - 4$

Answer: A. $20w - 8$

Translate the length:
$l = 9w - 4$

Use the perimeter formula:
$P = 2l + 2w$
$P = 2(9w - 4) + 2w$

Simplify:
$18w - 8 + 2w = 20w - 8$

RELATED VIDEO LESSON

Translating words into math

SCAN FOR VIDEO WALKTHROUGH
www.youtube.com/watch?v=Uc44b2PU9Yo

Turn phrases into expressions, equations, and inequalities, including the wording less than.

Ready for more practice? These reference questions are only a sample of what students are expected to know. Use the TEAS Math Workbook, TEAS Math QBank, and Infinite QBank at **app.bcraftmath.com** for repeated topic practice, mixed review, and full preparation. Additional free TEAS Math resources are available at **bcraftmath.com/teasmath**.

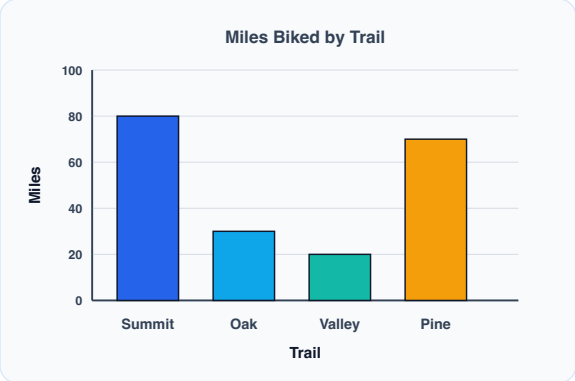
M.2.1: Tables, Charts, and Graphs

Quick reference and practice for reading tables, charts, and graphs.

QUICK REFERENCE

- Read the title first so you know what the graph is about.
- Check labels, units, legends, and scales before doing any math.
- Bar graphs compare categories.
- Circle graphs show parts of a whole.
- Tables usually give exact values that you can look up or compare.
- Be careful with graph scales that skip numbers.
- There are other types of graphs, such as line graphs and scatter plots.

1. A cyclist tracked miles biked on several trails. What percent of the total miles is not represented by Summit and Oak? Round to the nearest whole percent.



Answer: 45%

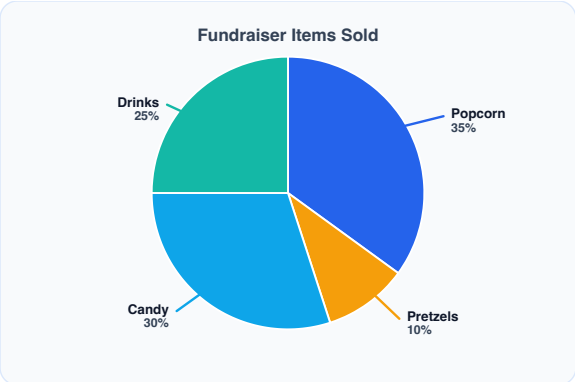
Find the total miles:
$80 + 30 + 20 + 70 = 200$

Find Summit and Oak together:
$80 + 30 = 110$

Find the other trails:
$200 - 110 = 90$

Convert to a percent:
$90 \div 200 = 0.45 = 45\%$

2. A circle graph shows fundraiser items sold. If 240 items were sold, how many items are not represented by Pretzels?



Answer: 216 items

Pretzels are 10%.

Find the percent that is not Pretzels:
$100\% - 10\% = 90\%$

Find 90% of 240:
$0.90 \times 240 = 216$

RELATED VIDEO LESSON

Reading tables and graphs

SCAN FOR VIDEO WALKTHROUGH
www.youtube.com/watch?v=qSLV_PKXpQ0

Read a table, compare values in a bar graph, and interpret a line graph. This lesson does not cover circle graphs.

M.2.2: Statistics

Quick reference and practice for mean, median, mode, and range.

QUICK REFERENCE

- Put the data in order first when you need the median, mode, or range.
- Mean is the average: add the values and divide by how many values there are.
- Median is the middle after the data is in order. An even number of values requires averaging the two middle values, where as an odd number has a single middle value.
- Mode is the value that shows up the most.
- Range is biggest minus smallest.

1. For the data set $70, 55, 35, 60, 75, 45, 25, 75, 75, 50$, find the mean, median, mode, and range.

Answer: **Mean:** 56.5; **median:** 57.5; **mode:** 75; **range:** 50

Find the sum and mean:
$565 \div 10 = 56.5$

Put the values in order:
$25, 35, 45, 50, 55, 60, 70, 75, 75, 75$

Average the two middle values:
$(55 + 60) \div 2 = 57.5$

The mode is 75, and the range is $75 - 25 = 50$.

2. A PE teacher lists these heights in inches: $66, 79, 59, 79, 79$. Find the mean, median, mode, and range.

Answer: **Mean:** 72.4; **median:** 79; **mode:** 79; **range:** 20

Find the sum and mean:
$362 \div 5 = 72.4$

Put the values in order:
$59, 66, 79, 79, 79$

The middle value is 79, so the median is 79.
The mode is 79, and the range is $79 - 59 = 20$.

RELATED VIDEO LESSON

Mean, median, mode, and range

SCAN FOR VIDEO WALKTHROUGH

www.youtube.com/watch?v=P-rYFf_91xc&t=46s

Starts at 0:46. Calculate all four statistics from test scores, including the median of an even-sized data set.

M.2.3: The Relationship Between Variables

Quick reference and practice for relationships between variables.

QUICK REFERENCE

- Identify the two things being compared.
- The independent variable is the one that changes first or gets controlled.
- The dependent variable is the result. It depends on the other variable.
- Positive relationship: both tend to move the same direction.
- Negative relationship: one goes up while the other goes down.
- Independent vs. dependent variables? Which is which? Which one depends on the other?

1. As the number of pages copied increases, the copying cost increases. Is this a positive or negative relationship?

Answer: Positive relationship

Both variables move in the same direction: more pages copied usually means a higher copying cost.

2. Which situation shows a negative relationship?

A. Storage space used and number of songs downloaded
B. Weight on a shelf and number of books placed on the shelf
C. Checkout total and number of coupons used
D. Amount of fence needed and perimeter of a yard

Answer: C. Checkout total and number of coupons used

A negative relationship means one variable increases while the other decreases. More coupons usually lower the checkout total.

3. The more sunlight a plant receives, the more it grows. Identify the independent and dependent variables.

Answer: Independent variable: hours of sunlight; dependent variable: plant growth

Plant growth depends on the amount of sunlight, so sunlight is the independent variable and plant growth is the dependent variable.

RELATED VIDEO LESSON

Relationships between variables

SCAN FOR VIDEO WALKTHROUGH

www.youtube.com/watch?v=3w6-gyF7Hlw

Identify positive and negative relationships and decide which variable is independent or dependent.

M.2.4: Geometry

Quick reference and practice for common TEAS geometry setups.

QUICK REFERENCE

- First decide what the problem wants: perimeter, area, circumference, volume, or a missing side.
- Perimeter is distance around, so use regular units.
- Area covers a surface, so use square units.
- Volume fills space, so use cubic units.
- Choose the formula based on the shape and what is missing.
- For irregular shapes, break the figure into shapes you already know.
- Be careful: sometimes you have to find a missing measurement before using the final formula.
- Keep π exact when the problem asks for an answer in terms of π.
- Use the formula list at the top of this page when you need a quick reminder.

1. A rectangle has a length of 9 ft and a perimeter of 34 ft. What is the area?

Answer: $72\ \text{ft}^2$

First find the width using the perimeter formula: $P = 2l + 2w$

$34 = 2(9) + 2w$

$34 = 18 + 2w$

$16 = 2w$

$w = 8$

Then find the area:

$A = lw = 9 \times 8 = 72$

2. What is the hypotenuse of a right triangle with legs 6 in and 8 in?

Answer: 10 in

Use the Pythagorean theorem:

$a^2 + b^2 = c^2$

$6^2 + 8^2 = c^2$

$36 + 64 = c^2$

$100 = c^2$

Take the square root:

$c = 10$

3. A circle has a radius of 25 mm. Write the circumference in terms of π.

Answer: $50\pi \text{ mm}$

The diameter is 50 mm. Use $C = \pi d$, so $C = 50\pi$ mm.

RELATED VIDEO LESSON

Circles and right triangles: live-session practice

SCAN FOR VIDEO WALKTHROUGH

www.youtube.com/watch?v=goFvYjGYU18&t=409s

Starts at 6:49 with the first of three circle examples: two on area and one finding circumference from area. Right-triangle practice using the Pythagorean theorem follows at 22:23.

M.2.5: Measurements and Conversions

Quick reference and practice for measurement conversion questions.

QUICK REFERENCE

- First identify where you are starting and where you need to end.
- Use the conversion factor given in the problem or from the table above.
- A proportion is a safe way to set up conversions because the units have to match.
- Keep the same units lined up across the proportion.
- Cross multiply and divide.
- Once you are confident, direct multiply/divide can be faster.
- The final answer should have the unit the question asked for, and the size should make sense.

1. Convert 85 mL to tsp. Enter only the number.

Answer: 17

Use the conversion $5 \text{ mL} = 1 \text{ tsp}$.

Set up a proportion:
$\frac{5 \text{ mL}}{1 \text{ tsp}} = \frac{85 \text{ mL}}{x \text{ tsp}}$

Cross multiply and divide:
$x = 85 \times 1 \div 5 = 17$

If you know whether to multiply or divide, that is faster. The proportion helps prevent mixing those up.

2. Fill in the blank: 225 in = ___ yd.

Answer: 6.25

Use the conversion $36 \text{ in} = 1 \text{ yd}$.

Set up a proportion:
$\frac{36 \text{ in}}{1 \text{ yd}} = \frac{225 \text{ in}}{x \text{ yd}}$

Cross multiply and divide:
$x = 225 \times 1 \div 36 = 6.25$

If you know whether to multiply or divide, that is faster. The proportion helps prevent mixing those up.

3. How many pounds are in 22 kilograms? Enter only the number.

Answer: 48.4

Use the conversion $1 \text{ kg} = 2.2 \text{ lb}$.

Set up a proportion:
$\frac{1 \text{ kg}}{2.2 \text{ lb}} = \frac{22 \text{ kg}}{x \text{ lb}}$

Cross multiply and divide:
$x = 22 \times 2.2 \div 1 = 48.4$

If you know whether to multiply or divide, that is faster. The proportion helps prevent mixing those up.

RELATED VIDEO LESSON

Standard and metric conversions



SCAN FOR VIDEO WALKTHROUGH

www.youtube.com/watch?v=VsAr-0N9BGw&t=116s

Starts at 1:56. Convert a distance using the supplied conversion factor and a proportion.

Put It All to Practice

This reference page is a quick review, not the full TEAS 7 Math course. The practice problems above are a small sample of the content students should know. Use the resources below for full preparation with structured practice, repeated topic drills, mixed review, and additional free study help.

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