

Step 1: A Quick Quiz

Part 1: No Calculator permitted

Whole Numbers:

- Multiply & dividing
 - 136×245 b) $272 \div 16$
- What is the remainder for:
 - $\frac{11}{3}$ b) $\frac{37}{13}$

Signed Numbers:

- Evaluate:
 - -2×3 b) $-2 \times (-5)$
 - -4^2 d) $(-4)^2$

Multiples:

- What is the greatest common factor of 12, 18, 24?
- What is the least common multiple of: 12, 24, 16?

Decimals:

- Convert to fraction and percent:
 - 0.15 b) 2.075
- Evaluate:
 - $0.89 + 0.125$ b) $0.4 - 0.375$
 - 0.036×1.25 d) $0.075 \div 2.5$
- Write each repeating decimal with bar notation:
 - 0.33333... b) 4.012121212...

Fractions:

- Convert $\frac{29}{8}$ to mixed number format.
- Convert $4\frac{3}{5}$ to improper number format.
- Convert to decimal:
 - $\frac{2}{5}$ b) $\frac{18}{8}$ c) $3\frac{1}{8}$
- Evaluate:
 - $\frac{5}{8} + \frac{3}{5}$ b) $2\frac{1}{9} - 1\frac{5}{6}$
 - $\frac{2}{5} \times 1\frac{3}{7}$ d) $3\frac{1}{3} \div 1\frac{1}{8}$

Find the mean, median, mode, and range for the following list of values:

- 8, 7, 4, 4, 4, 4, 2, 3, 5, 8, 6

Ratio and Proportion:

- Solve for x:
 - $\frac{x}{16} = \frac{1}{4}$ b) $\frac{12}{x} = \frac{6}{8}$
- If a painter can paint a 240m² wall in 3 days, how long will it take to paint a 400m² wall?
- If 7 plumbers can do a job in 6 days, how long will it take 3 plumbers to do the same job?

Rounding and ordering:

- Round 3141.159265 to the nearest:
 - Ten b) Hundredth
- Put in order from least to greatest:
 $2.125, 1\frac{3}{4}, 2.875, \frac{25}{8}, \frac{5}{2}, \sqrt{9}$

Percent:

- What percent is 3 of 25?
- What percent of 50 is 10?
- What number is 15% more than 20?
- What number is 25% less than 40?
- An acid solution is 35% acid, the rest is water. If the total amount of liquid is 450ml, then how much of the solution is water?
- Before leaving, Mike had filled up his car tank to the maximum capacity of 80L. If at the end of a drive, Mike has 63L left, what percent of the gas did Mike use?

Order of Operations:

- Evaluate:
 - $2 \times \left[\left(-2.4 - \frac{13}{5} \right)^2 + 2\frac{1}{2} - \left(-0.5 \times \frac{25}{5} \right) \right] - 4^2$

Algebra:

- Evaluate when: a=2, b=4, c=3 (keep your answer as decimal if it applies): $\frac{2ab-ac}{2b}$
- Simplify: $5p+2p-p$
- $\frac{2}{3}x = \frac{5}{6} + \frac{1}{9}$ solve for x.
- $8x - 2(3 - 4x) = x + 9$ solve for x.
- $y^2 - 2 = 14$ solve for y (only keep positive answer).

Part 2: Calculators permitted

Measurement:

1 inch = 2.54 cm, 1 foot = 12 inches, 1 mile = 1.6 km

Round final answers to the nearest hundredth:

- Convert 17.25 feet to
 - Inches b) meters
- Convert 6.25 square feet to
 - Square inches
 - Square meters
- Convert 4 km to
 - cm b) inches c) miles

Geometry:

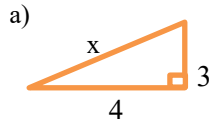
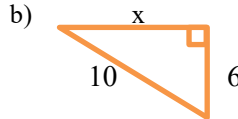
| | | |
|---|--|--|
| Circle: $A = \pi r^2$ $C = 2\pi r$ $C = \pi D$ | Rectangle: $A = l \times w$ $P = 2l + 2w$ | Triangle: $A = \frac{1}{2}bh$ |
| Trapezoid: $A = \frac{1}{2}(l_1 + l_2)h$ | Rectangular Solid $V = l \times w \times h$ SA $= 2wl + 2lh$ $+ 2wh$ $LA = 2(l + w)h$ | Cylinder: $V = Bh$ $SA = 2B + Ch$ B = area of base C = circumference |

Round final answers to the nearest hundredth:

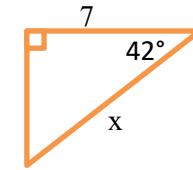
- What is the circumference of a circle with a diameter of 2"? What is its area?
- A circle has an area of 25 square cm, what is its circumference?
- What is the area of a rectangle that measures 5" x 1"? What is its perimeter?
- A triangle has an area of 45 square inches, if its base measures 10 inches what is its height?
- Find the area of a trapezoid with parallel side lengths of 4" and 6" and a height of 2".
- A cylinder has a diameter of 3" and a height of 10" what is its volume? Its surface area?

Trigonometry:

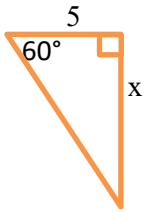
Round final answers to the nearest hundredth:

- find the length of side x
 - 
 - 

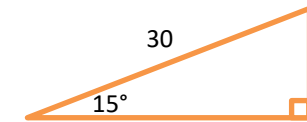
c)



d)



- Solve the triangle (find all information):



Step 2: Discover your weak areas

- Check your answers against the solution key.
- Try out a sample test either online or in the Learning Centre at KPU Tech campus.

Step 3: Practice

- Self-study or in groups.
- Free drop-in tutoring in the Learning Centre on KPU Tech campus

Answer Key

Whole Numbers

1. a) 33,320 b) 17
2. a) 2 b) 11

Signed Numbers

1. a) -6 b) 10 c) -16 d) 16

Factors and Multiples

1. 6 2. 48

Decimals

1. a) $\frac{3}{20}$, 15% b) $2\frac{3}{40}$, 207.5%
2. a) 1.015 b) 0.025 c) 0.045 d) 0.03
3. a) 0.3 b) 4.012

Fractions

1. $3\frac{5}{8}$ 2. $\frac{23}{5}$
3. a) 0.4 b) 2.25 c) 3.125
4. a) $\frac{49}{40}$ or $1\frac{9}{40}$ b) $\frac{5}{18}$ c) $\frac{4}{7}$ d) $\frac{80}{27}$ or $2\frac{26}{27}$

Find the mean, median, mode, and range for the following list of values:

1. mean, 5; median, 4; mode, 4; range, 6

Ratio and proportion

1. a) $x=4$ b) $x=16$
2. 5 days
3. 14 days

Rounding and Ordering

1. a) 3140 b) 3141.16
2. $1\frac{3}{4}$, 2.125, $\frac{5}{2}$, 2.875, $\sqrt{9}$, $\frac{25}{8}$

Percent

1. 12% 2. 20% 3. 23 4. 30 5. 292.5 6. 21.25%

Order of Operations

1. 9

Algebra

1. 1.25 2. $6p$ 3. $x = 1\frac{5}{12}$ 4. 1 5. 4

Measurement

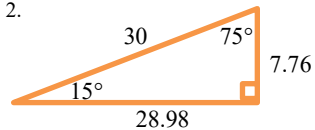
1. a) 207in b) 5.26m
2. a) $900in^2$ b) $0.58m^2$
3. a) 400,000cm b) 157,408.32in c) 2.50miles

Geometry

1. $C=6.28in$ $A=3.14in^2$ 2. $C = 17.72cm$
3. $A=60in^2$ $P=34in$ 4. Height = 9in
5. $A=10in^2$
6. $V=70.69in^3$ $SA=108.38in^2$

Trigonometry

1. a) $x=5$ b) $x=8$ c) $x=9.42$ d) $x=8.66$
2.



Check out resources At the Learning Centre nearest you.

kpu.ca/tlc

*KPU Tech (Cloverdale) Campus

(Drop-in)

Tel: 604-598-6062

Email: TLCcloverdale@kpu.ca

Room 1317 in the Library

Langley Campus

Tel: 604-599-3444

Email: TLClangley@kpu.ca

Room 2070

Richmond Campus

Tel: 604-599-3454

Email: TLCrichmond@kpu.ca

Room 1000 Library

Surrey Campus

Tel: 604-599-2437

Email: TLCsurrey@kpu.ca

Room A1650 in the Library

* KPU Tech Learning Centre specializes for serving Trades & Technology students.

Check out resources In a library

- One of the Kwantlen libraries if you know your student number, or a public library.
- Books on basic math, developmental math.
- Videos, CDs of basic math lessons.
- Math e-books on topics covered in the example test.

Don't know what material to choose? Ask KPU Tech Learning Centre staff for help on how to proceed with your studies.

Check out free resources on the Internet

- Khan Academy (www.khanacademy.org)
- Purple math (www.purplemath.com)
- Just Math (Patrickjmt.com)
- Slider Math (www.slidermath.com)
- Google it!

Preparing for the trades vocational math test



The Learning Centre

KPU Tech Campus

(Cloverdale)

Room 1317 in the Library

Tel: (604) 598-6062

(Leave a message if no one is available)

Email: TLCcloverdale@kpu.ca

Note: This brochure is NOT for CADD and Mechatronics applicants, please contact KPU Tech Learning Centre for more information.