

APPRENTICESHIP AND WORKPLACE MATHEMATICS 10

DATA PAGES

UNIT CONVERSION

	Common Imperial	Imperial and SI	SI
Length	1 mile = 1760 yards 1 mile = 5280 feet 1 yard = 3 feet 1 yard = 36 inches 1 foot = 12 inches	1 mile \approx 1.609 km 1 yard = 0.9144 m 1 foot = 30.48 cm 1 inch = 2.54 cm	1 km = 1000 m 1 m = 100 cm 1 cm = 10 mm
Mass (Weight)	1 ton = 2000 pounds 1 pound = 16 ounces	2.2 pounds \approx 1 kg 1 pound \approx 454 g 1 ounce \approx 28.35 g	1 t = 1000 kg 1 kg = 1000 g
Volume	1 gallon = 4 quarts 1 gallon (UK) \approx 1.2 gallons (US) 32 fluid ounces = 1 quart	1.06 quarts (US) \approx 1 L 0.26 gallons (US) \approx 1 L 3.52 fluid ounces (UK) \approx 100 mL 3.38 fluid ounces (US) \approx 100 mL	
Common Abbrevia- tions	mile = mi yard = yd feet = ' or ft inch = " or in ton = tn pound = lb ounce = oz fluid ounce = fl oz		kilometre = km metre = m centimetre = cm millimetre = mm tonne (metric ton) = t gram = g litre = L millilitre = mL

Temperature
$C = \frac{5}{9}(F - 32)$ $F = \frac{9}{5}C + 32$

FORMULAE

Trigonometry

(Put your calculator in Degree Mode)

- Right triangles

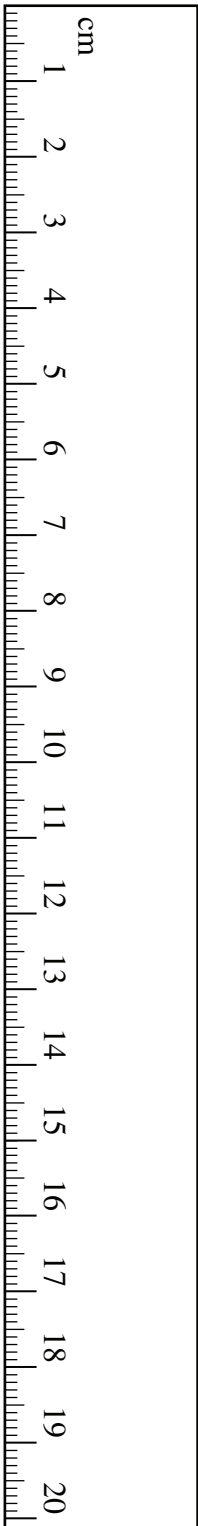
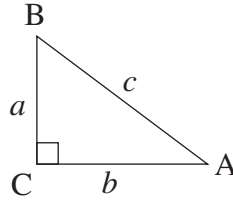
Pythagorean Theorem

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

$$\sin A = \frac{\text{opposite}}{\text{hypotenuse}}$$

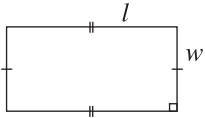
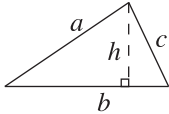
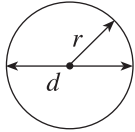
$$\cos A = \frac{\text{adjacent}}{\text{hypotenuse}}$$

$$\tan A = \frac{\text{opposite}}{\text{adjacent}}$$

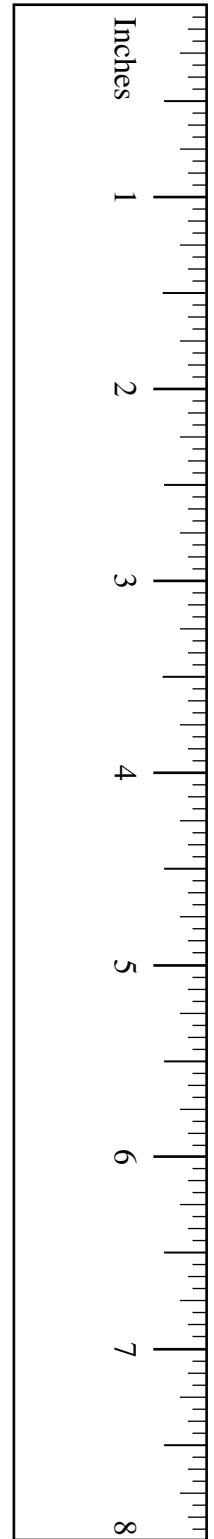


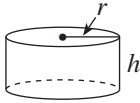
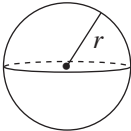
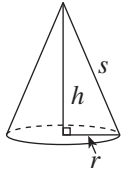
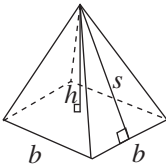
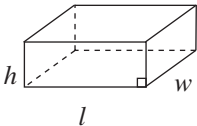
GEOMETRIC FORMULAE

Key Legend	
l = length w = width b = base h = height s = slant height r = radius d = diameter	P = perimeter C = circumference A = area SA = surface area V = volume

Geometric Figure	Perimeter	Area
Rectangle 	$P = 2l + 2w$ or $P = 2(l + w)$	$A = lw$
Triangle 	$P = a + b + c$	$A = \frac{bh}{2}$
Circle 	$C = \pi d$ or $C = 2\pi r$	$A = \pi r^2$

Note: Use the value of π programmed in your calculator rather than the approximation of 3.14.



Geometric Solid	Surface Area
Cylinder 	$A_{top} = \pi r^2$ $A_{base} = \pi r^2$ $A_{side} = 2\pi r h$ $SA = 2\pi r^2 + 2\pi r h$
Sphere 	$SA = 4\pi r^2$ or $SA = \pi d^2$
Cone 	$A_{side} = \pi r s$ $A_{base} = \pi r^2$ $SA = \pi r^2 + \pi r s$
Square-Based Pyramid 	$A_{triangle} = \frac{1}{2} b s$ (for each triangle) $A_{base} = b^2$ $SA = 2bs + b^2$
Rectangular Prism 	$SA = wh + wh + lw + lw + lh + lh$ or $SA = 2(wh + lw + lh)$
General Right Prism	$SA =$ the sum of the areas of all the faces
General Right Pyramid	$SA =$ the sum of the areas of all the faces

Note: Use the value of π programmed in your calculator rather than the approximation of 3.14.

Federal tax deductions
Effective January 1, 2009
Weekly (52 pay periods a year)
Also look up the tax deductions
in the provincial table

Retenues d'impôt fédéral
En vigueur le 1^{er} janvier 2009
Hebdomadaire (52 périodes de paie par année)
Cherchez aussi les retenues d'impôt
dans la table provinciale

Pay Rémunération	Federal claim codes/Codes de demande fédéraux										
	0	1	2	3	4	5	6	7	8	9	10
From Less than De Moins de	Deduct from each pay Retenez sur chaque paie										
335 - 339	44.65	15.55	12.70	7.00	1.30						
339 - 343	45.20	16.10	13.25	7.55	1.85						
343 - 347	45.80	16.65	13.80	8.10	2.45						
347 - 351	46.35	17.20	14.35	8.65	3.00						
351 - 355	46.90	17.75	14.90	9.25	3.55						
355 - 359	47.45	18.35	15.50	9.80	4.10						
359 - 363	48.00	18.90	16.05	10.35	4.65						
363 - 367	48.60	19.45	16.60	10.90	5.25						
367 - 371	49.15	20.00	17.15	11.45	5.80	.10					
371 - 375	49.70	20.55	17.70	12.05	6.35	.65					
375 - 379	50.25	21.15	18.30	12.60	6.90	1.20					
379 - 383	50.80	21.70	18.85	13.15	7.45	1.80					
383 - 387	51.40	22.25	19.40	13.70	8.00	2.35					
387 - 391	51.95	22.80	19.95	14.25	8.60	2.90					
391 - 395	52.50	23.35	20.50	14.85	9.15	3.45					
395 - 399	53.05	23.95	21.10	15.40	9.70	4.00					
399 - 403	53.60	24.50	21.65	15.95	10.25	4.60					
403 - 407	54.20	25.05	22.20	16.50	10.80	5.15					
407 - 411	54.75	25.60	22.75	17.05	11.40	5.70					
411 - 415	55.30	26.15	23.30	17.65	11.95	6.25	.55				
415 - 419	55.85	26.75	23.90	18.20	12.50	6.80	1.15				
419 - 423	56.40	27.30	24.45	18.75	13.05	7.40	1.70				
423 - 427	57.00	27.85	25.00	19.30	13.60	7.95	2.25				
427 - 431	57.55	28.40	25.55	19.85	14.20	8.50	2.80				
431 - 435	58.10	28.95	26.10	20.45	14.75	9.05	3.35				
435 - 439	58.65	29.50	26.70	21.00	15.30	9.60	3.95				
439 - 443	59.20	30.10	27.25	21.55	15.85	10.20	4.50				
443 - 447	59.80	30.65	27.80	22.10	16.40	10.75	5.05				
447 - 451	60.35	31.20	28.35	22.65	17.00	11.30	5.60				
451 - 455	60.90	31.75	28.90	23.25	17.55	11.85	6.15	.50			
455 - 459	61.45	32.30	29.50	23.80	18.10	12.40	6.75	1.05			
459 - 463	62.00	32.90	30.05	24.35	18.65	12.95	7.30	1.60			
463 - 467	62.60	33.45	30.60	24.90	19.20	13.55	7.85	2.15			
467 - 471	63.15	34.00	31.15	25.45	19.80	14.10	8.40	2.70			
471 - 475	63.70	34.55	31.70	26.05	20.35	14.65	8.95	3.30			
475 - 479	64.25	35.10	32.30	26.60	20.90	15.20	9.55	3.85			
479 - 483	64.80	35.70	32.85	27.15	21.45	15.75	10.10	4.40			
483 - 487	65.40	36.25	33.40	27.70	22.00	16.35	10.65	4.95			
487 - 491	65.95	36.80	33.95	28.25	22.60	16.90	11.20	5.50			
491 - 495	66.50	37.35	34.50	28.85	23.15	17.45	11.75	6.10	.40		
495 - 499	67.05	37.90	35.10	29.40	23.70	18.00	12.35	6.65	.95		
499 - 503	67.60	38.50	35.65	29.95	24.25	18.55	12.90	7.20	1.50		
503 - 507	68.20	39.05	36.20	30.50	24.80	19.15	13.45	7.75	2.05		
507 - 511	68.75	39.60	36.75	31.05	25.40	19.70	14.00	8.30	2.65		
511 - 515	69.30	40.15	37.30	31.65	25.95	20.25	14.55	8.90	3.20		
515 - 519	69.85	40.70	37.90	32.20	26.50	20.80	15.15	9.45	3.75		
519 - 523	70.40	41.30	38.45	32.75	27.05	21.35	15.70	10.00	4.30		
523 - 527	71.00	41.85	39.00	33.30	27.60	21.95	16.25	10.55	4.85		
527 - 531	71.55	42.40	39.55	33.85	28.20	22.50	16.80	11.10	5.45		
531 - 535	72.10	42.95	40.10	34.45	28.75	23.05	17.35	11.70	6.00	.30	
535 - 539	72.65	43.50	40.70	35.00	29.30	23.60	17.90	12.25	6.55	.85	
539 - 543	73.20	44.10	41.25	35.55	29.85	24.15	18.50	12.80	7.10	1.40	
543 - 547	73.80	44.65	41.80	36.10	30.40	24.75	19.05	13.35	7.65	2.00	
547 - 551	74.35	45.20	42.35	36.65	31.00	25.30	19.60	13.90	8.25	2.55	
551 - 555	74.90	45.75	42.90	37.25	31.55	25.85	20.15	14.50	8.80	3.10	

This table is available on TOD

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Vous pouvez obtenir cette table sur TSD

British Columbia provincial tax deductions

Effective January 1, 2009

Weekly (52 pay periods a year)

Also look up the tax deductions
in the federal table

Retenues d'impôt provincial de la Colombie-Britannique

En vigueur le 1^{er} janvier 2009

Hebdomadaire (52 périodes de paie par année)

Cherchez aussi les retenues d'impôt
dans la table fédérale

Pay Rémunération	Provincial claim codes/Codes de demande provinciaux											
	0	1	2	3	4	5	6	7	8	9	10	
From Less than De Moins de	Deduct from each pay Retenez sur chaque paie											
343 - 343	*	.00										<p>*You normally use claim code "0" only for non-resident employees. However, if you have non-resident employees who earn less than the minimum amount shown in the "Pay" column, you may not be able to use these tables. Instead, refer to the "Step-by-step calculation of tax deductions" in Section "A" of this publication.</p> <p>*Le code de demande «0» est normalement utilisé seulement pour les non-résidents. Cependant, si la rémunération de votre employé non résidant est inférieure au montant minimum indiqué dans la colonne «Rémunération», vous ne pourrez peut-être pas utiliser ces tables. Reportez-vous alors au «Calcul des retenues d'impôt, étape par étape» dans la section «A» de cette publication.</p>
343 - 345	9.30	.20										
345 - 347	9.45	.35										
347 - 349	9.60	.50										
349 - 351	9.80	.65										
351 - 353	9.95	.80										
353 - 355	10.10	.95										
355 - 357	10.25	1.15	.10									
357 - 359	10.40	1.30	.25									
359 - 361	10.55	1.45	.40									
361 - 363	10.75	1.60	.60									
363 - 365	10.90	1.75	.75									
365 - 367	11.05	1.90	.90									
367 - 369	11.20	2.10	1.05									
369 - 371	11.35	2.25	1.20									
371 - 373	11.50	2.40	1.35									
373 - 375	11.70	2.55	1.55									
375 - 377	11.85	2.70	1.70									
377 - 379	12.00	2.90	1.85									
379 - 381	12.15	3.05	2.00									
381 - 383	12.30	3.20	2.15	.10								
383 - 385	12.45	3.35	2.30	.25								
385 - 387	12.65	3.50	2.50	.45								
387 - 389	12.80	3.65	2.65	.60								
389 - 391	12.95	3.85	2.80	.75								
391 - 393	13.10	4.00	2.95	.90								
393 - 395	13.25	4.15	3.10	1.05								
395 - 397	13.40	4.30	3.30	1.20								
397 - 399	13.60	4.45	3.45	1.40								
399 - 401	13.75	4.60	3.60	1.55								
401 - 403	13.90	4.80	3.75	1.70								
403 - 405	14.05	4.95	3.90	1.85								
405 - 407	14.20	5.10	4.05	2.00								
407 - 409	14.35	5.25	4.25	2.15	.10							
409 - 411	14.55	5.40	4.40	2.35	.30							
411 - 413	14.70	5.55	4.55	2.50	.45							
413 - 415	14.85	5.75	4.70	2.65	.60							
415 - 417	15.00	5.90	4.85	2.80	.75							
417 - 419	15.15	6.05	5.00	2.95	.90							
419 - 421	15.30	6.20	5.20	3.10	1.05							
421 - 423	15.50	6.35	5.35	3.30	1.25							
423 - 425	15.65	6.50	5.50	3.45	1.40							
425 - 427	15.80	6.70	5.65	3.60	1.55							
427 - 429	15.95	6.85	5.80	3.75	1.70							
429 - 431	16.10	7.00	5.95	3.90	1.85							
431 - 433	16.25	7.15	6.15	4.10	2.00							
433 - 435	16.45	7.30	6.30	4.25	2.20	.15						
435 - 437	16.60	7.45	6.45	4.40	2.35	.30						
437 - 439	16.75	7.65	6.60	4.55	2.50	.45						
439 - 441	16.90	7.80	6.75	4.70	2.65	.60						
441 - 443	17.05	7.95	6.90	4.85	2.80	.75						
443 - 445	17.20	8.10	7.10	5.05	2.95	.90						
445 - 447	17.40	8.25	7.25	5.20	3.15	1.10						
447 - 449	17.55	8.40	7.40	5.35	3.30	1.25						
449 - 451	17.70	8.60	7.55	5.50	3.45	1.40						

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ROUGH WORK SPACE

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